CRITERION 1 – CURRICULAR ASPECTS

KEY INDICATOR: 1.2 Academic Flexibility.

Metric Number: 1.2.2 Percentage of students enrolled in certificate/Value added courses and also completed online courses of MOOCs, SWAYAM, NPTEL etc. as against the total number of students during the last five years.

List of Value added courses/Certificate Courses, online courses of MOOCs, SWAYAM, NPTEL etc.

Academic Year 2021-22

Sl. No.	Name of VAC/Certificate Course
1.	Electric Vehicle Technology
2.	Public Speaking and Presentation Skills
3.	Block chain Basics
4.	Entrepreneurship and innovation
5.	Advanced Survey Instruments
6.	CRDI- Art of Combustion in CI Engines
7.	Python using Arduino 3.0

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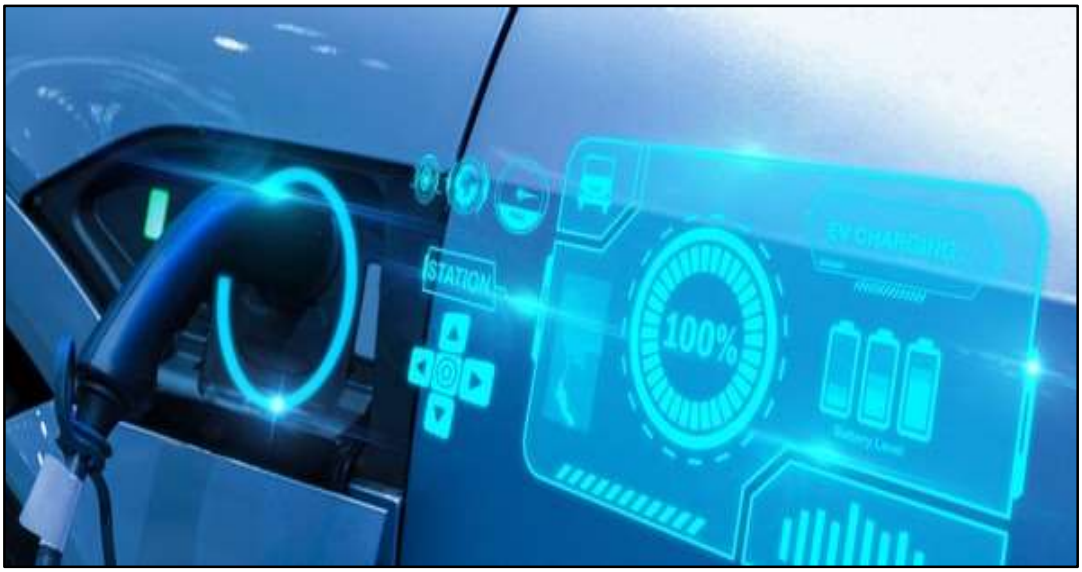
Department of Electronics and Communication Engineering
ACY:2021-2022



VALUE-ADDED COURSE
ON
"ELECTRIC VEHICLE TECHNOLOGY"

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CITY ENGINEERING COLLEGE

To,

30/03/2022

The principal,
City Engineering College,
Bangalore.

Sub: Regarding permission to conduct Value-Added Course on
"ELECTRIC VEHICLE TECHNOLOGY"

Respected sir,

We would like to conduct a Value-Added Course on "ELECTRIC VEHICLE TECHNOLOGY" for ACY 2021-22 students from 04 /04/2022 to 08/04/2022 for Eighth sem ECE students.

Electric vehicles are the future of transportation. Electric mobility has become an essential part of the energy transition and will imply significant changes for vehicle manufacturers, governments, companies and individuals. Electric Vehicles have completely different systems & architecture compared to petrol or diesel vehicles. To explore opportunities in EV sector, one needs to have a deeper understanding of the system, it's dependencies & interconnections, sizing, operating conditions, dynamic behaviours & more.

These 5 days program will help students in understanding the electric vehicle technologies and gain appreciable knowledge

Hence, I am seeking your permission to conduct the course. Kindly do the needful.

Yours faithfully,

HOD, ECE

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Ref.No: CEC/ECE/C1/1.2.1/ACY- 2021-22/01 01/04/2022

CIRCULAR

This is to inform that all sixth sem ECE students that our department is conducting five-day value-added course on "ELECTRIC VEHICLE TECHNOLOGY "from 04/04/2022 to 08/04/2022. Those students interested can participate in the course and enrol yourself.

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Coordinator HOD, ECE Principal

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Approved by AICTE New Delhi and affiliated by VTU, Belagavi
Doddakallasandra, Off Kanakapura Main Road,
Next to Gokulam Apartment, Bengaluru - 560062

Five-day Value-Added course on

"ELECTRIC VEHICLE TECHNOLOGY"

(04/04/2022 – 08/04/2022)

Organized by

Department of Electronics & Communication Engineering
City Engineering College
Bengaluru - 560062

Shylaja K
Assistant Professor
Dept. of Electronics & communication Engineering
Mobile: +91 9916780169
Email: shylajak@cityengineeringcollege.ac.in

Chief Patron

Dr. K.R. Paramahamsa
Chairman,
MBA, Ph.D. (USA). D. Lit
AMC – City group of Institutions,
Bengaluru.

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Dr. Jyothi P
Vice- Principal, CEC, Bengaluru

Dr. Sowmya Naik P.T.
Executive Officer, CEC, Bengaluru

Convener
G.S Mallikarjuna
HOD, ECE, CEC, Bengaluru

Venue: VLSI Lab

About the College

City Engineering College, Bangalore affiliated to Visvesvaraya Technological University (VTU) is centrally located in Bangalore. The College has expanded over the last 19 years with sophisticated infrastructure as a part of the Institution's commitment to provide higher quality education in the area of Engineering. The highly facilitated landmark building – provides a perfect ambience for creativity and learning. City Engineering College is known for its academic excellence, friendly welcoming atmosphere and community spirit. Over large number of full-time students study here in a wide range of programs. It is a centre of talented, experienced teachers who inspire and energize the students to achieve the best.

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About the ECE Department

The department of Electronics and communication engineering was started in the year 2001 is known for imparting quality education. The department has good infrastructure with experienced faculties. Organizes industrial visits, workshops, technical talks, project exhibitions and training programs regularly which helps in bridging the gap between academics and industry.

About the course

Electric vehicles are the future of transportation. Electric mobility has become an essential part of the energy transition and will imply significant changes for vehicle manufacturers, governments, companies and individuals. Electric Vehicles have completely different systems & architecture compared to petrol or diesel vehicles. To explore opportunities in EV sector, one needs to have a deeper understanding of the system, it's dependencies & interconnections, sizing, operating conditions, dynamic behaviours & more.

Resource Person

Dr. Ramachrandra C G

Professor of Mechanical Engineering, school of Engineering, Presidency University

Guidelines

A test (assessment questions) will be conducted by the coordinators at the end of the program.

The certificates will be issued to those participants who have attended the program with minimum 80% attendance and scored minimum 60% marks in the test.

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CITY ENGINEERING COLLEGE

Department of Electronics and Communication Engineering

Value- Added Course on

ELECTRIC VEHICLE TECHNOLOGY

Schedule

ACY:2021-22 venue: VLSI Lab

Day	Date	Session-1 9:30-11:00am		Session-2 11:15 -1:15pm		Session-3 2:00-4:30pm
1	04/04/22	Electric vehicle power train & non power train components-Introduction	Tea break 11:00am to 11:15am	Electric vehicle power train components	Lunch break 1:15pm to 2:00pm	Electric vehicle non power train components
2	05/04/22	Traction battery technology and battery testing-Introduction		Traction battery pack in electric vehicle		Battery testing
3	06/04/22	Battery management system-Introduction		Types of battery management system		Battery management system for electric vehicle
4	07/04/22	Traction motors and motor controls-Introduction		Advanced motor electric drive techniques in electric vehicle		Motor control application
5	08/04/22	Electric vehicle architecture and integration-Introduction		Electric vehicle architecture design and analysis		Electric vehicle grid integration

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Department of Electronics and Communication Engineering
Value- Added Course on
ELECTRIC VEHICLE TECHNOLOGY

SYLLABUS

Objectives:

1. Understand EV Fundamentals: Comprehend the basic principles of electric vehicle operation, including differences from conventional vehicles.

2. Analyse EV Powertrains: Evaluate various types of electric powertrains and their applications in different vehicle classes.

3. Examine Battery Technologies: Explore different battery chemistries, their characteristics, charging methods, and safety considerations.

4. Discuss Sustainability Aspects: Assess the environmental impact of EVs compared to conventional vehicles, including life cycle analysis and emissions reduction potential.

Module 1: Introduction to Electric Vehicles

- Definition and types of electric vehicles
- History and evolution of electric vehicles
- Importance of electric vehicles in modern transportation

Module 2: Traction Motors

- Traction motor fundamentals:
  - Principles of operation
  - Comparison of motor types (DC, AC induction, PMSM)
- Motor controllers:
  - Role and function
  - Power electronics for motor control

Module 3: Battery Management Systems (BMS)

- Functionality and importance of BMS in EVs
- Components of BMS: sensors, controllers, software
- Role of BMS in monitoring battery health, safety, and performance

Module 4: Traction Batteries

- Importance of traction batteries in EVs
- Comparison between traction batteries and conventional automotive batteries
- Battery pack assembly and management systems
- Thermal management and cooling strategies

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Module 5: Electric Vehicle Grid Integration

- Vehicle-to-grid (V2G) concepts:
  - V2G technologies and benefits
  - Grid stability and smart grid interactions

- Vehicle dynamics and motor integration:
  - Placement and mounting considerations
  - Mechanical and electrical interfacing with other vehicle systems

Course Outcomes

At the end of the course, students were able to:

- Describe the fundamental principles and components of electric vehicles.
- Compare and contrast different types of EV powertrains and their applications.
- Evaluate various battery technologies used in electric vehicles.
- Discuss the environmental and sustainability aspects of electric vehicles.

Coordinator | HOD, ECE | Principal

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Department of Electronics and Communication Engineering
Value Added Course on
ELECTRIC VEHICLE TECHNOLOGY
Resource person profile

Dr. Ramachandra C G

Professor of Mechanical Engineering,
School of Engineering, Presidency University

- Academic Professional with 24 years of Experience in Academic & Training, Research & Development and Academic Administration with B.E., MTech., Ph.D., Post-Doc., Qualification.
- Proficient in Building Team with Vision and Motivating Students and Staffs for Excellence.
- Ability to Maintain the Cordial Relation with the Parents, Teachers, Students, Industrial Professionals, Academic Experts.
- Ability to Work in Challenging Working Atmosphere.
- Holds Guinness World Records for the "Thickest Book in the World" which is 5.8 Meters (19 Feet 0.34 Inch) & having 1,00,100 Pages contribution as an Author for the Book entitled World 2023 (Wide Outcomes on Research & Latest Development) Published by ESN Publications (Research & Development) and LOSD (London Organization of Skills Development) with ISBN-978-93-95196-75-8
- Received 8 Patents; Received 18 Academic Excellence Awards from the National / International Professional Bodies.
- Member-Panel of Examiner for Presidency University, VTU, Anna University, JSS Science & Technological University, Shivaji University, Nitte University Reva University etc.,

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Department of Electronics and Communication Engineering

Value Added Course on

ELECTRIC VEHICLE TECHNOLOGY

Students List

SL.NO.	USN	NAME
1	1CE16EC015	INDIRESH H BRAHMADESHEM
2	1CE17EC028	JYOTHESH KARNAM
3	1CE18EC001	A T HARSHITH
4	1CE18EC002	AKANKSHA G KULKARNI
5	1CE18EC003	AMARJITH V S
6	1CE18EC004	ANKIT KUMAR
7	1CE18EC005	GANGADHAR P UPAR
8	1CE18EC006	JOYEETA SARKAR
9	1CE18EC007	KARTHIK P S
10	1CE18EC008	KRUTHIKA S
11	1CE18EC009	KUSHAL V
12	1CE18EC010	MANOJ KUMAR R S
13	1CE18EC011	MOHAMMED IMRANULLA KHAN
14	1CE18EC012	NAYANA CY
15	1CE18EC013	NOOR FATHIMA AFSAR
16	1CE18EC014	POORNESH K
17	1CE18EC015	PRAJWAL L
18	1CE18EC016	RAKSHITHA T K
19	1CE18EC017	SAGAR S
20	1CE18EC018	SAIMA IRFATH J
21	1CE18EC019	SANGEETHA C
22	1CE18EC020	SHREYAS H C
23	1CE18EC021	SHRINIDHI B CHEREKAR
24	1CE18EC022	SOUNDARYA H
25	1CE18EC023	SOWNDARYA HC
26	1CE18EC024	SRIVATHSA G
27	1CE18EC025	UMME ASRA N
	1CE19EC400	NAVEEN N POOJARI

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Department of Electronics and Communication Engineering
Value Added Course on
"ELECTRIC VEHICLE TECHNOLOGY"

Students Attendance List

SEM: 6th

SL. NO.	USN	NAME	4/4/2022	5/4/2022	6/4/2022	7/4/2022	8/4/2022	Sign
1	1CE16EC015	INDIRESH H BRAHMADESHEM	P	P	P	P	P	
2	1CE17EC028	JYOTHESH KARNAM	P	A	P	P	P	
3	1CE18EC001	A T HARSHITH	P	P	P	P	P	
4	1CE18EC002	AKANKSHA G KULKARNI	P	P	P	P	P	
5	1CE18EC003	AMARJITH V S	P	P	P	P	P	
6	1CE18EC004	ANKIT KUMAR	P	P	P	P	P	
7	1CE18EC005	GANGADHAR P UPAR	P	P	P	P	P	
8	1CE18EC006	JOYEETA SARKAR	P	P	P	P	P	
9	1CE18EC007	KARTHIK P S	P	P	P	P	P	
10	1CE18EC008	KRUTHIKA S	P	P	P	P	P	
11	1CE18EC009	KUSHAL V	P	P	P	P	P	
12	1CE18EC010	MANOJ KUMAR R S	P	P	P	P	P	
13	1CE18EC011	MOHAMMED IMRANULLA KHAN	P	P	P	P	P	
14	1CE18EC012	NAYANA CY	P	P	P	A	P	
15	1CE18EC013	NOOR FATHIMA AFSAR	P	P	P	P	P	
16	1CE18EC014	POORNESH K	P	P	P	P	P	
17	1CE18EC015	PRAJWAL L	P	P	P	P	P	
18	1CE18EC016	RAKSHITHA T K	P	P	P	P	P	
19	1CE18EC017	SAGAR S	P	P	P	P	P	
20	1CE18EC018	SAIMA IRFATH J	P	P	P	P	P	
21	1CE18EC019	SANGEETHA C	P	P	A	P	P	
22	1CE18EC020	SHREYAS H C	P	P	P	P	P	
23	1CE18EC021	SHRINIDHI B CHEREKAR	P	P	P	P	P	
24	1CE18EC022	SOUNDARYA H	P	P	P	P	P	
25	1CE18EC023	SOWNDARYA HC	P	P	P	P	P	
26	1CE18EC024	SRIVATHSA G	P	P	P	P	P	
27	1CE18EC025	UMME ASRA N	P	P	P	P	P	
28	1CE19EC400	NAVEEN N POOJARI	P	P	P	P	P	

Coordinator

HOD, ECE

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Department of Electronics and Communication Engineering
Value Added Course on
ELECTRIC VEHICLE TECHNOLOGY

Assessment questions

1. Which component of an electric vehicle is responsible for storing electrical energy?

   A) Motor

   B) Battery

   C) Controller

   D) Inverter

2. The term "regenerative braking" in electric vehicles refers to:

   A) Using electricity to power the brakes.

   B) Capturing energy from braking to recharge the battery.

   C) Using mechanical brakes to recharge the battery.

   D) Reducing the energy consumption of the brakes.

3. The range of an electric vehicle refers to:

   A) The maximum speed it can achieve.

   B) The distance it can travel on a single charge.

   C) The number of seats it has.

   D) The size of its battery pack

4. DCFC (DC Fast Charging) stations are used primarily for:

   A) Charging electric vehicles at home.

   B) Quick charging electric vehicles on the go.

   C) Solar-powered charging of electric vehicles.

   D) Monitoring the performance of electric vehicles.

5. Which of the following is not a type of electric vehicle?

   A) Hybrid Electric Vehicle (HEV)

   B) Plug-in Hybrid Electric Vehicle (PHEV)

   C) Hydrogen Fuel Cell Electric Vehicle (FCEV)

   D) Internal Combustion Engine Vehicle (ICEV)

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6. The unit used to measure the capacity of a battery pack in an electric vehicle is:

A) Watts

B) Volts

C) Amp-hours

D) Horsepower

7. Lithium-ion batteries are commonly used in electric vehicles because they:

A) Are less expensive than other types of batteries.

B) Have a longer lifespan and higher energy density.

C) Are easier to recycle.

D) Require less maintenance

8. What does kWh stand for in the context of electric vehicles?

A) Kilowatt hours

B) Kilowatt heat

C) Kilowatt horsepower

D) Kilowatt handling

9. The "MPGe" rating of an electric vehicle stands for:

A) Miles Per Gallon equivalent

B) Motor Power Generation efficiency

C) Maximum Power generation estimate

D) Mileage Performance Grade equivalent

10. Which of the following is a method to extend the range of an electric vehicle?

A) Overloading the vehicle with passengers

B) Reducing the tire pressure

C) Preconditioning the cabin temperature while charging

D) Driving at high speeds

11. The component that controls the flow of electricity between the battery and the motor in an electric vehicle is called the:

A) Inverter B) Controller C) Converter D) Regulator

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12. The main advantage of a Plug-in Hybrid Electric Vehicle (PHEV) over a (HEV) is:

A) Lower purchase price

B) Higher fuel efficiency

C) Ability to drive solely on electric power for a limited range

D) Lower maintenance costs

13. Level 1 charging for electric vehicles typically involves:

A) Using a standard household outlet (120V)

B) Using a DC fast charger

C) Using a special 240V charging station

D) Using a solar-powered charging station

14. The process of converting direct current (DC) from the battery to alternating current (AC) for the motor is performed by the:

A) Inverter B) Converter C) Regulator D) Transformer

15. The term "charging infrastructure" refers to:

A) The design of electric vehicle batteries

B) The network of charging stations for electric vehicles

C) The cooling system of electric vehicle motors

D) The safety features in electric vehicle design

16. A Battery Management System (BMS) in an electric vehicle is responsible for:

A) Controlling the climate inside the vehicle cabin

B) Monitoring and protecting the battery pack

C) Managing the transmission of electrical power to the motor

D) Regulating the charging rate of the battery

17. Which factor contributes to the lower operating costs of electric vehicles compared to internal combustion engine vehicles?

A) Higher insurance premiums B) Lower maintenance costs

C) Higher fuel costs D) Higher registration fees

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18. The efficiency of an electric motor in converting electrical energy into mechanical energy is typically around:

A) 50-60%

B) 70-80%

C) 90-95%

D) 100%

19. Which of the following is a benefit of using electric vehicles in terms of environmental impact?

A) Higher greenhouse gas emissions

B) Increased air pollution

C) Reduced noise pollution

D) Higher water consumption

20. The term "state of charge" (SOC) refers to:

A) The condition of the vehicle's suspension system

B) The percentage of available battery capacity that is currently filled

C) The level of tire wear

D) The amount of fuel left in the vehicle

21. The process of transferring electrical energy from the grid to the battery of an electric vehicle is known as:

A) Grid connection

B) Smart charging

C) Power transmission

D) Vehicle-to-grid (V2G) charging

22. The term "kilowatt" (kW) is used to measure:

A) Energy capacity of the battery

B) Efficiency of the regenerative braking system

C) Distance travelled on a single charge

D) Power output of the motor

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23. The process of discharging energy from an electric vehicle's battery to the grid when plugged in is known as:

A) Smart discharging B) Vehicle-to-grid (V2G) technology

C) Power sharing D) Grid synchronization

24. The term "powertrain" in an electric vehicle refers to:

A) system responsible for generating electricity B) components that deliver power to the wheels

C) The safety features of the vehicle D) The climate control system

25. The process of converting mechanical energy (such as from braking) into electrical energy to recharge the battery is called:

A) Kinetic energy conversion B) Potential energy conversion

C) Regenerative braking D) Mechanical energy harvesting

Key Answers:

1.**B** 2.**B** 3.**B** 4.**B** 5.**D** 6.**C** 7.**B** 8.**A** 9.**A** 10.**C** 11.**B** 12.**C** 13.**A**

14.**A** 15.**B** 16.**B** 17.**B** 18.**C** 19.**C** 20.**B** 21.**B** 22.**D** 23.**B** 24.**B** 25.**C**

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Department of Electronics and Communication Engineering
Value Added Course on
"ELECTRIC VEHICLE TECHNOLOGY"
Assessment questions

Name: Poornesh.k
USN: 1CE18EC014
Sem: 6th

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    D. Grid synchronization

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24. The term "powertrain" in an electric vehicle refers to:

A. System responsible for generating electricity

B. Components that deliver power to the wheels

C. The safety features of the vehicle

D. The climate control system

25. The process of converting mechanical energy (such as from braking) into electrical energy to recharge the battery is called:

A. Kinetic energy conversion

B. Potential energy conversion

C. Regenerative braking

D. Mechanical energy harvesting

25/25

Coordinator

HOD,ECE

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Department of Electronics and Communication Engineering

Value Added Course on

ELECTRIC VEHICLE TECHNOLOGY

Assessment Marks

SL.NO.	USN	NAME	Marks
1	1CE16EC015	INDIRESH H BRAHMADESHEM	20
2	1CE17EC028	JYOTHESH KARNAM	18
3	1CE18EC001	A T HARSHITH	18
4	1CE18EC002	AKANKSHA G KULKARNI	22
5	1CE18EC003	AMARJITH V S	24
6	1CE18EC004	ANKIT KUMAR	25
7	1CE18EC005	GANGADHAR P UPAR	18
8	1CE18EC006	JOYEETA SARKAR	22
9	1CE18EC007	KARTHIK P S	22
10	1CE18EC008	KRUTHIKA S	22
11	1CE18EC009	KUSHAL V	18
12	1CE18EC010	MANOJ KUMAR R S	19
13	1CE18EC011	MOHAMMED IMRANULLA KHAN	24
14	1CE18EC012	NAYANA CY	23
15	1CE18EC013	NOOR FATHIMA AFSAR	18
16	1CE18EC014	POORNESH K	25
17	1CE18EC015	PRAJWAL L	23
18	1CE18EC016	RAKSHITHA T K	20
19	1CE18EC017	SAGAR S	18
20	1CE18EC018	SAIMA IRFATH J	18
21	1CE18EC019	SANGEETHA C	20
22	1CE18EC020	SHREYAS H C	22
23	1CE18EC021	SHRINIDHI B CHEREKAR	24
24	1CE18EC022	SOUNDARYA H	22
25	1CE18EC023	SOWNDARYA HC	24
26	1CE18EC024	SRIVATHSA G	24
27	1CE18EC025	UMME ASRA N	18
28	1CE19EC400	NAVEEN N POOJARI	17

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USN	NAMES	Course was well-organized in terms of sequence and pacing of topics	The teaching methodology was effective in grasping the concepts.	The resources (online materials, etc.) were adequate for learning	The aspects of the course found most beneficial to our learning and career goals	Satisfied with the overall quality of the course content
1CE16EC015	INDIRESH H BRAHMADESHEM	Strongly Agree	Agree	Strongly Agree	Agree	Strongly Agree
1CE17EC028	JYOTHESH KARNAM	Strongly Agree	Agree	Strongly Agree	Agree	Strongly Agree
1CE18EC001	A T HARSHITH	Strongly Agree	Agree	Strongly Agree	Agree	Strongly Agree
1CE18EC002	AKANKSHA G KULKARNI	Strongly Agree	Agree	Strongly Agree	Agree	Strongly Agree
1CE18EC003	AMARJITH V S	Agree	Agree	Strongly Agree	Agree	Strongly Agree
1CE18EC004	ANKIT KUMAR	Agree	Agree	Strongly Agree	Agree	Agree
1CE18EC005	GANGADHAR P UPAR	Agree	Agree	Strongly Agree	Agree	Agree
1CE18EC006	JOYEETA SARKAR	Strongly Agree	Agree	Strongly Agree	Agree	Strongly Agree
1CE18EC007	KARTHIK P S	Strongly Agree	Agree	Disagree	Agree	Agree
1CE18EC008	KRUTHIKA S	Strongly Agree	Agree	Strongly Agree	Agree	Agree
1CE18EC009	KUSHAL V	Agree	Agree	Strongly Agree	Agree	Agree
1CE18EC010	MANOJ KUMAR R S	Strongly Agree	Agree	Strongly Agree	Agree	Agree
1CE18EC011	MOHAMMED IMRANULLA KHAN	Strongly Agree	Agree	Strongly Agree	Agree	Agree
1CE18EC012	NAYANA CY	Agree	Strongly Agree	Agree	Agree	Strongly Agree
1CE18EC013	NOOR FATHIMA AFSAR	Agree	Agree	Agree	Agree	Strongly Agree
1CE18EC014	POORNESH K	Agree	Agree	Agree	Agree	Strongly Agree
1CE18EC015	PRAJWAL L	Strongly Agree	Agree	Agree	Agree	Strongly Agree
1CE18EC016	RAKSHITHA T K	Strongly Agree	Agree	Agree	Agree	Strongly Agree
1CE18EC017	SAGAR S	Strongly Agree	Agree	Agree	Agree	Agree
1CE18EC018	SAIMA IRFATH J	Agree	Agree	Strongly Agree	Agree	Agree
1CE18EC019	SANGEETHA C	Strongly Agree	Agree	Agree	Agree	Agree
1CE18EC020	SHREYAS H C	Agree	Uncertain	Agree	Agree	Agree
1CE18EC021	SHRINIDHI B CHEREKAR	Agree	Uncertain	Agree	Agree	Agree
1CE18EC022	SOUNDARYA H	Agree	Uncertain	Agree	Agree	Agree
1CE18EC023	SOWNDARYA HC	Agree	Agree	Agree	Agree	Agree
1CE18EC024	SRIVATHSA G	Agree	Agree	Agree	Agree	Agree
1CE18EC025	UMME ASRA N	Agree	Agree	Agree	Agree	Agree
1CE19EC400	NAVEEN N POOJARI	Agree	Agree	Agree	Agree	Agree

Note: Express your opinion with words as strongly agree, Agree, Neutral, Disagree and Strongly disagree

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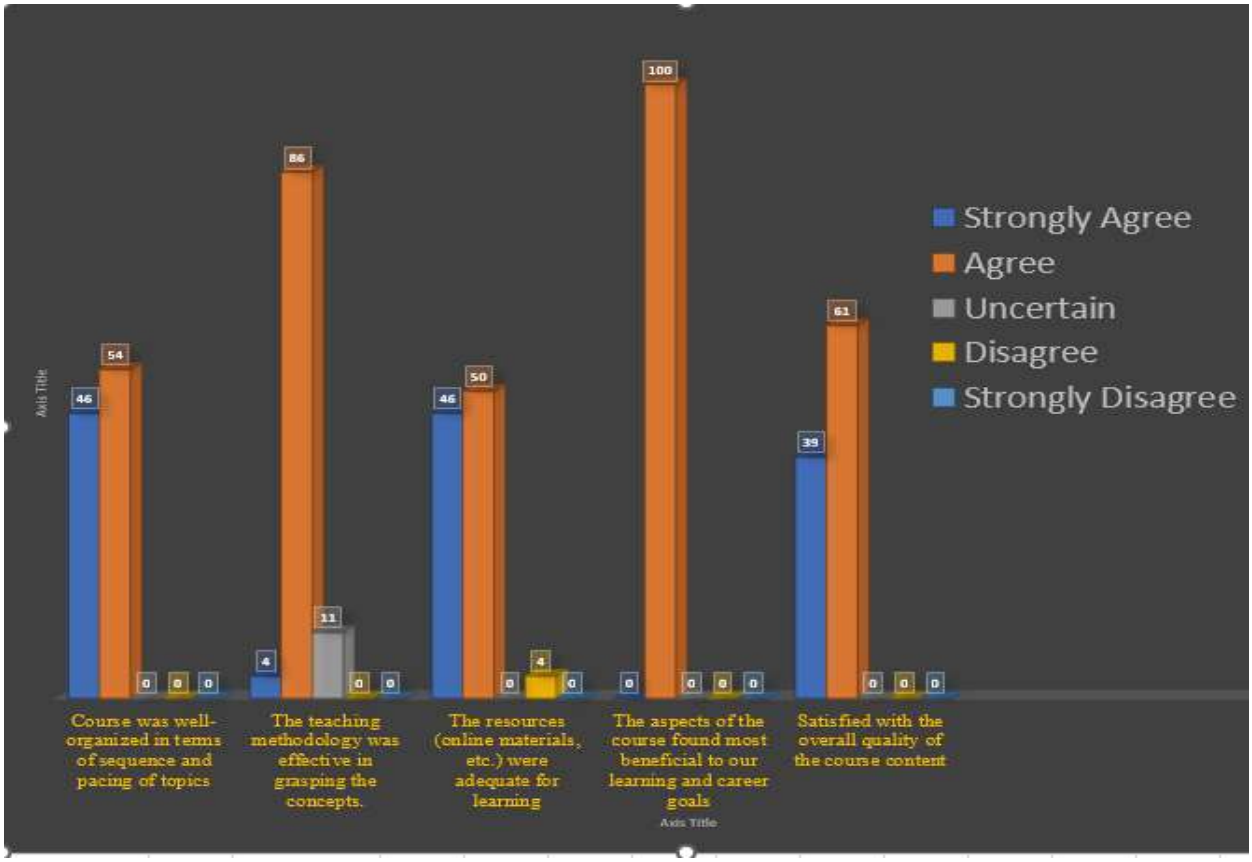
Department of Electronics and Communication Engineering

Value Added Course on

ELECTRIC VEHICLE TECHNOLOGY

Feedback analysis chart



Summary:

- Students appreciated the relevance of the course content to current trends and technologies in electric vehicles.
- Many found the topics covered to be comprehensive and aligned with industry expectations
- Overall satisfaction with the electric vehicle technology course was high among students.
- Feedback indicated a desire for more opportunities for practical application of skills learned during the course.

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Department of Electronics and Communication Engineering
Value Added Course on
ELECTRIC VEHICLE TECHNOLOGY

Course Report

A five-day Value-Added course on was organised by Department of Electronics and Communication Engineering from04/04/2021 to for sixth sem ECE students.

The resource person was Dr. C G RAMACHANDRA.

Day1: The event began with a formal inaugural function attended by the principal, HODs of various departments, HOD- ECE, faculties and students.

Program started with the prayer. Welcome address, Introduction about the course and the resource person was given by Ms. Deepthi, faculty, ECE. later the session was handed over to the resource person. Resource person gave introduction about the e-mobility adoption, electric vehicles, power train and non-power train components.

Day2: Session started with the introduction of Traction battery and testing. Resource person in detail explained about the battery technology, traction battery pack and battery testing.

Day3: Session began with understanding how a battery needs to be maintained. What are the different types of battery management systems are there. How it is employed to Electric vehicle.

Day4: A small discussion about the previous day's topics covered and then the resource person explained how to select a motor, what are the techniques for it in electric vehicles and the application of motor control.

Day:5 Session started with the architecture of electric vehicle, its design analysis and grid integration. Finally, session concluded with a good quote: "*Let's drive the change together*"

Participants shared their views about the course.

The course concluded with a brief note on few key takeaways.

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City Engineering College

Doddakalasandra, Bangalore-560062

Department of Electronics & Communication Engineering

Certificate of Participation

This is to Certify that

Mr. Poornesh K (1CE18EC014)

has Participated in five day Add-on course "**Electric Vehicle Technology**" organized by Department of Electronics and Communication engineering held from 4th April 2022 to 8th April 2022

HOD

Principal

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Doddakalasandra, Bangalore-560062

Department of Electronics & Communication Engineering

Certificate of Participation

This is to Certify that

Ms. Umme Asra N (1CE18EC025)

has Participated in five day Add-on course "**Electric Vehicle Technology**" organized by Department of Electronics and Communication engineering held from 4th April 2022 to 8th April 2022

HOD

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CITY ENGINEERING COLLEGE

Department of Computer Science and Engineering

Academic Year 2021- 2022

Value Added Course

On

Public Speaking and Presentation Skills

28-03-22 to 01-04-2022

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PRINCIPAL
CITY ENGINEERING COLLEGE
Kanakapura Main Road, Bangalore-560061

CITY ENGINEERING COLLEGE

Date: 15-3-2022

To

The Principal
City Engineering College
Bangalore

Sub: Regarding permission to conduct a value-added course

Respected Sir,

We would like to conduct a Value-added course on "**Public Speaking and Presentation Skills**" for second year students from 28-03-2022 to 01-04-2022. This course ensures that individuals are not only academically prepared but also equipped with the communication skills necessary for success in the dynamic landscape of the professional world.. So, I request you to permit us to conduct this course. Kindly do the needful.

Mr. Vivekavardhana Reddy
HOD
Department of CSE

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CITY ENGINEERING COLLEGE

Department of Computer Science and Engineering

Ref No: CEC/CSE/C1/1.2.1/ACY 2021-22/OR/04 Date: 21/03/2022

CIRCULAR

Sub: Conducting a Value added course

This is to inform all the concerned that a 5-day value added course on **Public Speaking and Presentation Skills** by Ms Anagha S, Assistant Professor, Department of PG Studies & research in Psychology, Kateel Ashok Pai Memorial College. Clinical Psychologist, Manasa Nursing Home, Shimogga.has been organized from 28/3/2022 to 1/4/2022. All the students have to participate compulsorily for the same. Attendance will be viewed strictly. All the students are hereby instructed to attend the session and get the maximum benefits.

Mr. Vivekavardhana Reddy
HOD
Department of CSE

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Department of Computer Science and Engineering

Value-added course on Pubic Speaking and Presentation Skills

Date: 28-03-2022 to 01-04-2022

Schedule

Academic Year: 2021-22 Venue: CEC Auditorium

Date	Session 1 (9:15– 11:15)	Session 2 (11:30– 1:30)	Session 2 (2:00 – 4:00)
28-03-2022	Introduction to Public Speaking	Identify common fears and anxieties related to public speaking.	Elements of Effective Communication
29-03-2022	Structuring Your Speech	Understand the impact of body language and voice modulation.	Message Clarity and Conciseness
30-03-2022	Captivating Presentation Techniques	Develop strategies for confidently addressing questions.	Handling Q&A Sessions
31-03-2022	Building Confidence and Overcoming Nervousness	Adapt presentations on the spot.	Dealing with Presentation Challenges
01-04-2022	Advanced Public Speaking Techniques	Understand how to adapt communication for different audience types	Individual Speech Presentations and Feedback

Coordinator
Mr. Girisha G A

Mr. Vivekavardhana Reddy
HOD

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CITY ENGINEERING COLLEGE

Department of Computer Science and Engineering

Value Added Course on Public Speaking and Presentation Skills

Course Content

Module	Topic	Content
1	Introduction to Public Speaking	Understand the importance of public speaking. Identify common fears and anxieties related to public speaking. Learn strategies to overcome fears and build confidence.
	Elements of Effective Communication	Explore verbal and non-verbal communication skills. Understand the impact of body language and voice modulation. Practice effective communication techniques.
2	Structuring Your Speech	Learn the components of a well-structured speech. Develop techniques for organizing content. Create memorable openings and closings.
	Message Clarity and Conciseness	Choose impactful words for clear communication. Eliminate jargon and unnecessary details. Practice delivering concise messages.
3	Captivating Presentation Techniques	Explore effective use of visual aids and storytelling. Engage the audience through interactive elements. Practice captivating presentation techniques.
	Handling Q&A Sessions	Develop strategies for confidently addressing questions. Handle challenging or unexpected questions with composure. Understand the dynamics of Q&A sessions.
4	Building Confidence and Overcoming Nervousness	Learn techniques for calming nerves and visualization. Practice positive self-talk for building confidence. Participate in exercises to overcome nervousness.
	Dealing with Presentation Challenges	Address unexpected challenges, such as technical issues. Adapt presentations on the spot. Turn mistakes into opportunities for growth.
5	Advanced Public Speaking Techniques	Explore advanced techniques like persuasion and humor. Understand how to adapt communication for different audience types. Practice advanced public speaking skills.
	Individual Speech Presentations and Feedback	Deliver prepared speeches to showcase learned skills. Receive constructive feedback from instructors and peers. Gain personalized tips for improvement.

Coordinator
Mr. Girisha G A

Mr. Vivekavardhana Reddy
HOD

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Department of Computer Science and Engineering

Value-added course on Pubic Speaking and Presentation Skills

Date: 28-03-2022 to 01-04-2022

Resource Person Profile

Anagha S is a compassionate and dedicated teacher with a diverse background in clinical psychology and academia. She has three years of experience, working as an assistant professor at Kateel Ashok Pai Memorial College and as a clinical psychologist at Manasa Nursing Home. Anagha holds an M.Sc. in Psychology from SDM PG Centre, Ujire, where she achieved an impressive 80.80%. Her experiences as an academician involved teaching and research guidance for both undergraduate and postgraduate students, serving on various committees, and participating in organizing an international conference. Additionally, her role as a clinical psychologist included case history taking, counselling, handling clinical interns' classes and discussions, as well as conducting psychometric assessments and certifications. Anagha also gained valuable internship experiences at the National Institute of Advanced Studies (NIAS) and the Bangalore Neuro Centre, where she worked on projects related to science communication and interned under a neuropsychologist, respectively. Furthermore, Anagha has published articles in peer-reviewed journals, focusing on topics such as academic resilience among young adults and the relationship between forgiveness and happiness among the same demographic. This demonstrates Anagha's scholarly pursuits and her commitment to contributing to the field of psychology through research and publication. Overall, Anagha's profile underscores her multifaceted expertise in both clinical psychology and academic instruction, showcasing her abilities in research, teaching, counselling, and organizational roles. Her educational achievements, professional experiences, and scholarly publications collectively reflect her dedication, competence, and well-rounded skill set in the field of psychology.

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CITY ENGINEERING COLLEGE

Department of Computer Science and Engineering

Academic Year: 2021-2022 **Date: 28-03-2022 to 01-04-2022**

Value Added Course on Public Speaking and Presentation Skills

Student List

SL NO	USN	NAME
1	1CE20CS001	ABHAY
2	1CE20CS002	ABHINAV KUMAR SINGH
3	1CE20CS003	ABHISHEK VATS
4	1CE20CS004	ADARSH MISHRA S
5	1CE20CS005	ADITHI B
6	1CE20CS006	AFNAN AHMED
7	1CE20CS007	AISHWARYA
8	1CE20CS008	AJAY ANUPAM
9	1CE20CS009	AMIR ANJUM
10	1CE20CS010	AMULYA Y R
11	1CE20CS011	ANAND M
12	1CE20CS012	ANANYA B C
13	1CE20CS013	ANANYA BHAGAVAN
14	1CE20CS014	ANURADHA SHARMA
15	1CE20CS015	ANUSHREE B S
16	1CE20CS016	ARAVIND V
17	1CE20CS017	ASTHA
18	1CE20CS018	B DHANALAKSHMI BAI
19	1CE20CS019	BENITTA HATHSIYAL . X
21	1CE20CS021	BHARGAVI N PRAKASH
22	1CE20CS022	CHANDANA G
23	1CE20CS023	CHAITANYA C
24	1CE20CS024	DANIYA KHANUM
25	1CE20CS025	DEEKSHA R GOWDA
26	1CE20CS026	DEEPAK KUMAR R
27	1CE20CS027	DEEPASHREE N
28	1CE20CS028	DEEPTHI S
29	1CE20CS029	DHANUSH KUMAR D
30	1CE20CS030	DIVYASHREE S

SL NO	USN	NAME
31	1CE20CS031	D R MOHAN KUMAR
32	1CE20CS032	FOUZIA I
33	1CE20CS033	GANESH
34	1CE20CS034	GIRIJA NARAYAN HEGDE
35	1CE20CS035	GOWTHAM S V
36	1CE20CS036	HALEEMA SULTANA
37	1CE20CS037	IRAM SHAIKH
38	1CE20CS038	JUDAH A
39	1CE20CS039	JYOTHI JR SAHANI
40	1CE20CS040	K G DHANYA JOGI
41	1CE20CS041	KASIBA AFFRIEN
42	1CE20CS042	KAUSHIK M R
43	1CE20CS043	KEERTHANA L
44	1CE20CS044	KRUPASHREE G
45	1CE20CS045	KUMARASWAMY P
46	1CE20CS046	LIKITHA R
47	1CE20CS047	M R ADHITHI
48	1CE20CS048	MANASA P
49	1CE20CS049	MOHAMMAD MOIN KADRI
50	1CE20CS050	MOHAMMED TAUHEED PASHA
51	1CE20CS051	MONIKA G
52	1CE20CS052	N ARSHIYA ALMAS
53	1CE20CS053	NAMRATA PALAKI
54	1CE20CS054	NAVEEN K V
55	1CE20CS055	NIMMI SAGAR
56	1CE20CS056	OMKAR KUNDANGAR
57	1CE20CS057	POOJA S
58	1CE20CS058	PRANAM K R
59	1CE20CS059	PULKITH YADAV

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SL NO	USN	NAME
60	1CE20CS060	PUSHKAR
61	1CE20CS061	R A RAJESH
62	1CE20CS062	RAVI KUMAR
63	1CE20CS063	RAVIPRAKASHA
64	1CE20CS065	SAMANA R
65	1CE20CS066	SAMIR YOUSUFF KHAN
66	1CE20CS068	SHOBA H N
68	1CE20CS069	SNEHA S
69	1CE20CS070	SONAM VISHWAKARMA
70	1CE20CS071	SPOORTHI M G
71	1CE20CS072	SUBHENDU SAGAR
72	1CE20CS073	SUBRAMANI M
73	1CE20CS074	SULAIMAN KHAN
74	1CE20CS075	SWATI SATEESH KUMAR KUDRAGI
75	1CE20CS076	SYED HOUZAIFA
76	1CE20CS077	SYED NAWAZ
77	1CE20CS078	TARIQ ANJUM
78	1CE20CS079	TARUN V
79	1CE20CS080	TEJAS B R
80	1CE20CS081	TEJAS J KUMAR
81	1CE20CS082	UMME HANI M A

SL NO	USN	NAME
82	1CE20CS083	V MANOJ KUMAR
83	1CE20CS084	VAISHNAVI K
84	1CE20CS085	VENUGOPAL D
85	1CE20CS086	VISHWA V
86	1CE20CS087	VIVEK GAUTAM
87	1CE20CS089	YASHASHREE R
88	1CE20CS090	YASHASWINI R P
89	1CE20CS091	SUJAY V
90	1CE19CS036	IMRAN KHAN N
91	1CE20AI001	ABDUL FAHEEM
92	1CE20AI002	HAJIRA AHMED
93	1CE20AI003	KEDAR JOSHI
94	1CE20AI004	KOKILA K R
95	1CE20AI005	RITHIK MARIAN S
96	1CE20AI006	SHARON ZIPPORAH SEBASTIAN
97	1CE20AI007	SHARONA SAM
98	1CE20AI008	SUHAS GAJANANA
99	1CE20AI009	SYEDA ALIYAH BAKSHI
100	1CE20IS02	AAYUSHA KUMARI
101	1CE20IS03	AMISHA RASHMINATH
102	1CE20IS01	LIKHITH R J

Coordinator
Mr. Girisha G A

Mr. Vivekavardhana Reddy
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Department of Computer Science and Engineering

Value Added Course on Public Speaking and Presentation Skills

Attendance List

1	1CE20CS001	ABHAY	A	P	P	P	P	P	
2	1CE20CS002	ABHINAV KUMAR SINGH	P	P	P	P	P	P	
3	1CE20CS003	ABHISHEK VATS	P	P	P	P	P	P	
4	1CE20CS004	ADARSH MISHRA S	P	P	A	P	P	P	
5	1CE20CS005	ADITHI B	P	P	P	P	P	P	
6	1CE20CS006	AFNAN AHMED	P	P	P	P	P	P	
7	1CE20CS007	AISHWARYA	P	P	P	P	P	P	
8	1CE20CS008	AJAY ANUPAM	P	P	P	P	P	P	
9	1CE20CS009	AMIR ANJUM	P	A	P	P	P	P	
10	1CE20CS010	AMULYA Y R	P	P	P	P	P	P	
11	1CE20CS011	ANAND M	P	P	P	P	P	P	
12	1CE20CS012	ANANYA B C	P	P	P	P	P	A	
13	1CE20CS013	ANANYA BHAGAVAN	P	P	P	P	P	P	
14	1CE20CS014	ANURADHA SHARMA	P	P	P	A	P	P	
15	1CE20CS015	ANUSHREE B S	P	P	P	P	P	P	
16	1CE20CS016	ARAVIND V	P	P	P	P	P	P	
17	1CE20CS017	ASTHA	P	P	P	P	P	P	
18	1CE20CS018	B DHANALAKSHMI BAI	P	P	P	P	P	P	
19	1CE20CS019	BENITTA HATHSIYAL . X	P	P	P	P	P	P	
21	1CE20CS021	BHARGAVI N PRAKASH	P	A	P	P	P	P	
22	1CE20CS022	CHANDANA G	P	P	P	P	P	P	
23	1CE20CS023	CHAITANYA C	P	P	P	P	P	A	

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24	1CE20CS024	DANIYA KHANUM	P	P	P	P	P	P	Daniya
25	1CE20CS025	DEEKSHA R GOWDA	P	P	P	P	P	P	Deeksha
26	1CE20CS026	DEEPAK KUMAR R	P	P	P	P	P	P	Deepak.
27	1CE20CS027	DEEPASHREE N	A	P	P	P	P	P	
28	1CE20CS028	DEEPTHI S	P	P	P	P	P	P	
29	1CE20CS029	DHANUSH KUMAR D	P	P	P	P	P	P	
30	1CE20CS030	DIVYASHREE S	P	P	P	A	P	P	Divya
31	1CE20CS031	D R MOHAN KUMAR	P	P	P	P	P	P	
32	1CE20CS032	FOUZIA I	P	P	P	P	P	P	Fouzia
33	1CE20CS033	GANESH	P	P	P	P	P	P	
34	1CE20CS034	GIRIJA NARAYAN HEGDE	P	P	P	P	P	P	Girija
35	1CE20CS035	GOWTHAM S V	P	A	P	P	P	P	
36	1CE20CS036	HALEEMA SULTANA	P	P	P	P	P	P	
37	1CE20CS037	IRAM SHAIKH	P	P	P	P	P	P	
38	1CE20CS038	JUDAH A	P	P	P	P	P	A	
39	1CE20CS039	JYOTHI JR SAHANI	P	P	P	P	P	P	Jyothi
40	1CE20CS040	K G DHANYA JOGI	P	P	P	P	P	P	Dhanya.
41	1CE20CS041	KASIBA AFFRIEN	P	P	P	P	P	P	
42	1CE20CS042	KAUSHIK M R	P	P	P	P	P	P	
43	1CE20CS043	KEERTHANA L	P	P	P	P	P	P	Keerthana
44	1CE20CS044	KRUPASHREE G	P	P	A	P	P	P	Krupashree.
45	1CE20CS045	KUMARASWAMY P	P	P	P	P	P	P	KumaraSwamy
46	1CE20CS046	LIKITHA R	P	P	P	P	P	P	
47	1CE20CS047	M R ADHITHI	P	P	P	P	P	P	
48	1CE20CS048	MANASA P	P	P	P	P	P	P	
49	1CE20CS049	MOHAMMAD MOIN KADRI	P	P	P	P	A	P	
50	1CE20CS050	MOHAMMED TAUHEED PASHA	P	P	P	P	P	P	

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51	1CE20CS051	MONIKA G	P	P	P	P	P	P	Monikag
52	1CE20CS052	N ARSHIYA ALMAS	A	P	P	P	P	P	Arshiya
53	1CE20CS053	NAMRATA PALAKI	P	P	P	P	P	P	Namrata
54	1CE20CS054	NAVEEN K V	P	P	P	A	P	P	NKV.
55	1CE20CS055	NIMMI SAGAR	P	P	P	P	P	P	Nimmi S
56	1CE20CS056	OMKAR KUNDANGAR	P	P	P	P	P	A	Omkar
57	1CE20CS057	POOJA S	P	P	P	P	P	P	Pooja
58	1CE20CS058	PRANAM K R	P	A	P	P	P	P	Pranam
59	1CE20CS059	PULKITH YADAV	P	P	P	P	P	P	Pulkith.
60	1CE20CS060	PUSHKAR	P	P	P	P	P	P	Pushkar
61	1CE20CS061	R A RAJESH	P	P	P	P	P	P	RAR.
62	1CE20CS062	RAVI KUMAR	P	P	P	P	P	P	Ravikumar
63	1CE20CS063	RAVIPRAKASHA	P	P	P	P	A	P	RaviPrakash
64	1CE20CS065	SAMANA R	P	P	P	P	P	P	SamanaR.
65	1CE20CS066	SAMIR YOUSUFF KHAN	P	P	P	P	P	P	SamirYousuf
66	1CE20CS068	SHOBA H N	P	P	P	P	P	P	ShobhaH.N
68	1CE20CS069	SNEHA S	P	P	A	P	P	P	SnehaS
69	1CE20CS070	SONAM VISHWAKARMA	P	P	P	P	P	P	SonamV.
70	1CE20CS071	SPOORTHI M G	P	P	P	P	P	P	Spoorthi M.G
71	1CE20CS072	SUBHENDU SAGAR	P	P	P	P	P	P	SubenduSagar
72	1CE20CS073	SUBRAMANI M	P	P	P	P	P	P	Subramani
73	1CE20CS074	SULAIMAN KHAN	P	P	P	P	P	P	KhanSulaiman
74	1CE20CS075	SWATI SATEESH KUMAR KUDRAGI	P	P	P	P	P	A	Swati
75	1CE20CS076	SYED HOUZAIFA	P	P	P	P	P	P	Houzaife
76	1CE20CS077	SYED NAWAZ	P	P	P	P	P	P	Nawaz
77	1CE20CS078	TARIQ ANJUM	P	P	P	P	P	P	TariqAnjum
78	1CE20CS079	TARUN V	A	P	P	P	P	P	Tarun
79	1CE20CS080	TEJAS B R	P	P	P	P	P	P	Tejas

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80	1CE20CS081	TEJAS J KUMAR	P	P	P	P	P	P	TejasKumar
81	1CE20CS082	UMME HANI M A	A	P	P	P	P	P	Ummehani
82	1CE20CS083	V MANOJ KUMAR	P	P	P	P	P	P	VMK
83	1CE20CS084	VAISHNAVI K	P	P	P	P	P	P	vaishnaviK
84	1CE20CS085	VENUGOPAL D	P	P	P	P	P	P	VenuGopalD
85	1CE20CS086	VISHWA V	P	P	P	A	P	P	VishwaV.
86	1CE20CS087	VIVEK GAUTAM	P	P	P	P	P	P	Vivek
87	1CE20CS089	YASHASHREE R	P	A	P	P	P	P	Yashashree
88	1CE20CS090	YASHASWINI R P	P	P	P	P	P	P	Yashaswini
89	1CE20CS091	SUJAY V	P	P	P	P	P	P	Sujay. V.
90	1CE19CS036	IMRAN KHAN N	P	P	P	P	P	P	ImranKhanN
91	1CE20AI001	ABDUL FAHEEM	P	P	P	P	P	P	AbdulRahim
92	1CE20AI002	HAJIRA AHMED	P	P	P	P	A	P	Hajira.
93	1CE20AI003	KEDAR JOSHI	P	P	P	P	P	P	KedarJoshi
94	1CE20AI004	KOKILA K R	P	P	P	P	P	P	Kokila
95	1CE20AI005	RITHIK MARIAN S	P	P	A	P	P	P	Rithik
96	1CE20AI006	SHARON ZIPPORAH SEBASTIAN	P	P	P	P	P	P	Sharon
97	1CE20AI007	SHARONA SAM	P	P	P	P	P	P	SharonaSam
98	1CE20AI008	SUHAS GAJANANA	P	P	P	P	P	P	SuhasG
99	1CE20AI009	SYEDA ALIYAH BAKSHI	P	P	P	P	P	A	AliyaBakshi
100	1CE20IS02	AAYUSHA KUMARI	P	P	P	P	P	P	Aayushakumari
101	1CE20IS03	AMISHA RASHMINATH	P	P	P	P	P	P	Amisha.
102	1CE20IS01	LIKHITH R J	A	P	P	P	P	P	Likhith

Coordinator
Mr. Girisha G A

Mr. Vivekavardhana Reddy
HOD

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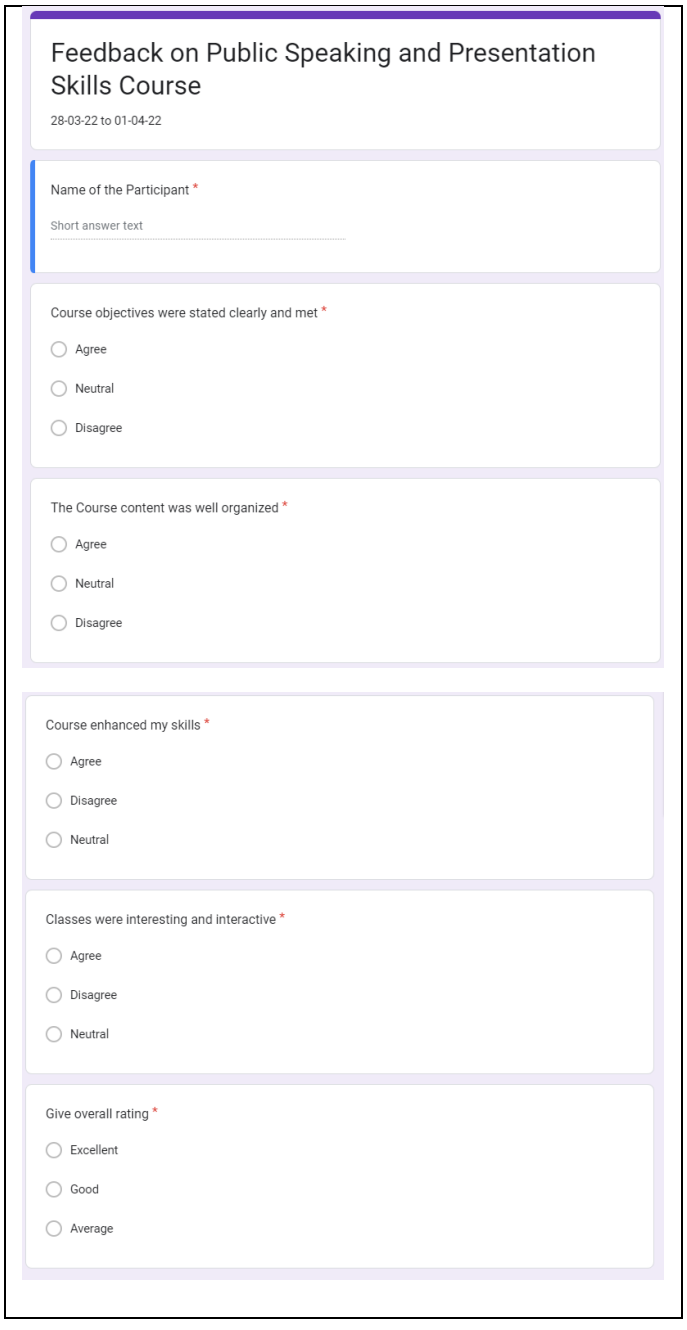
Department of Computer Science and Engineering

Academic Year: 2021-2022 **Date: 28-03-2022 to 01-04-2022**



Feedback on Public Speaking and Presentation Skills Course

28-03-22 to 01-04-22

Name of the Participant *

Short answer text

Course objectives were stated clearly and met *

- Agree
- Neutral
- Disagree

The Course content was well organized *

- Agree
- Neutral
- Disagree

Course enhanced my skills *

- Agree
- Disagree
- Neutral

Classes were interesting and interactive *

- Agree
- Disagree
- Neutral

Give overall rating *

- Excellent
- Good
- Average

FIG1: SCREENSHOT OF FEEDBACK QUESTIONNAIRE

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Department of Computer Science and Engineering

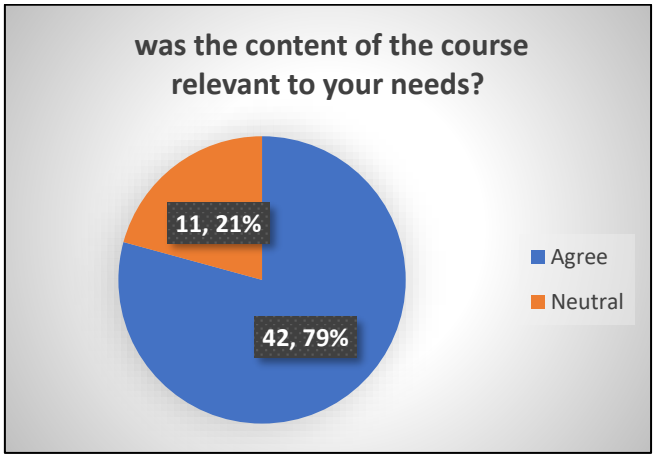
Academic Year: 2021-2022 **Date: 28-03-2022 to 01-04-2022**

Value Added Course on Public Speaking and Presentation Skills

Student Feedback Analysis

Sample Feedback

Timestamp	Name of the Participant	was the content of the course relevant to your needs?	Was there a good balance between theoretical concepts and practical exercises	was the instructor knowledgeable about public speaking and presentation skills	Classes were interesting and interactive	Give overall rating
04-01-2021 17:07	Vaishnavi	Agree	Agree	Agree	Agree	Good
04-02-2022 17:07	Samir	Agree	Neutral	Agree	Neutral	Good
04-02-2022 17:08	Juda	Neutral	Agree	Neutral	Agree	Good
04-02-2022 17:28	Imaran Khan	Agree	Agree	Agree	Agree	Excellent
04-02-2022 17:30	Pranam	Neutral	Agree	Neutral	Neutral	Average
04-02-2022 17:37	SAMANA	Agree	Neutral	Agree	Neutral	Good
04-02-2022 17:38	M R Adithi	Agree	Neutral	Agree	Agree	Good
04-02-2022 17:39	Vivek Gautam	Agree	Agree	Neutral	Agree	Average



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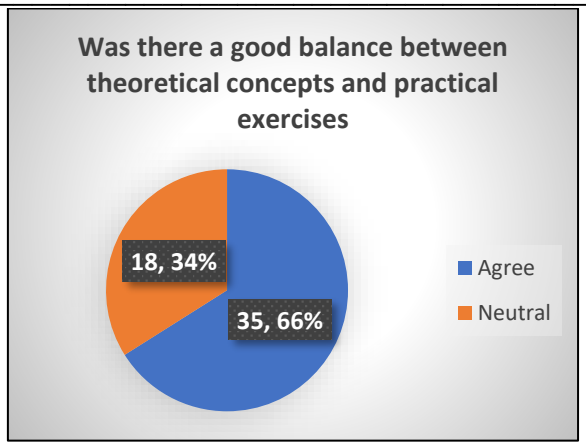

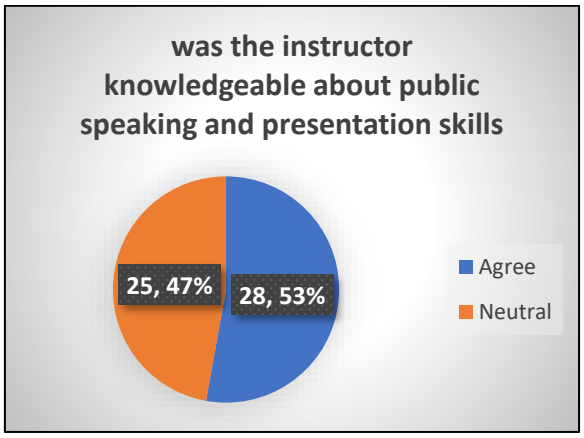

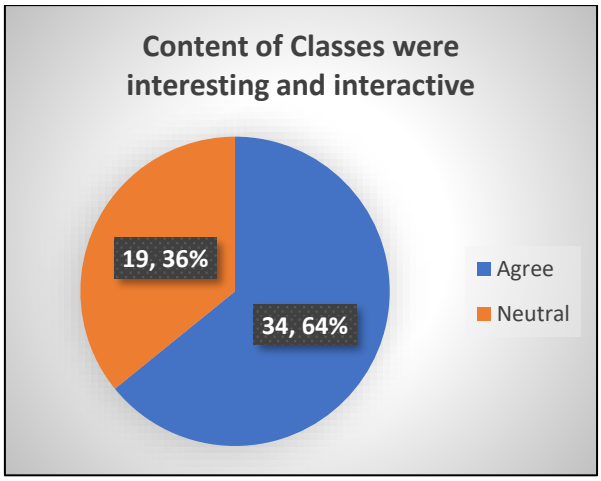

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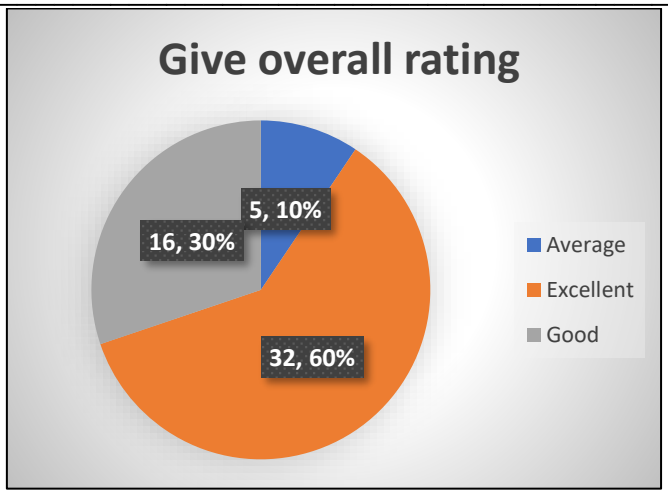

FIG 2: FEEDBACK ANALYSIS

Course Outcome

Participants will possess a solid theoretical foundation in public speaking principles, enhancing their overall understanding of effective communication.

1. Participants will demonstrate proficiency in advanced communication techniques, incorporating persuasion, influencing skills, and humour effectively.
2. Participants will exhibit increased confidence in public speaking and the ability to adapt to unexpected challenges, fostering resilience in professional settings.
3. Participants will be adept at applying theoretical knowledge in practical scenarios, honing their ability to communicate effectively in diverse situations.
4. Participants will develop a mindset for continuous improvement, utilizing personalized feedback to refine their communication skills over time.

Coordinator
Mr. Girisha G A

Mr. Vivekavardhana Reddy
HOD

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Department of Computer Science and Engineering

A Report on Value-Added Course on "Public Speaking and Presentation Skill"

A five-day Value Added Course on **Public Speaking skill and Presentation Skill** was organised by the Department of Computer Science and Engineering from 28/3/2022 to 1/4/2022. for Computer Science and Engineering students in the Project Laboratory. by **Ms Anagha S,** Assistant Professor, Department of PG Studies & research in Psychology, Kateel Ashok Pai Memorial College. Clinical Psychologist, Manasa Nursing Home, Shimogga was the resource person.

Day 1: Foundations of Public Speaking

Morning Session:

The event began with a formal inaugural function. **Dr. H N Thippeswamy, Principal CEC, Dr. Jyothi P, Vice Principal and HOD of CSE** were present during the inauguration. The program began by seeking the blessings of Almighty with invocation and lighting of lamp. Principal advised the students to utilize the benefits of the course completely. **Dr. Sowmya Naik** Welcomed the resource person and gave a course overview. Later the session was handed over to the speaker.

Session 1: Introduction to Public Speaking

Participants were introduced to the significance of public speaking, delving into understanding their audience and purpose. Strategies to overcome common fears and anxieties were discussed, fostering an environment of confidence.

Afternoon Session: Elements of Effective Communication

Verbal and non-verbal communication skills were explored, emphasizing the importance of body language and voice modulation. Participants practiced incorporating these elements to enhance their communication effectiveness.

Day 2: Crafting Compelling Messages

Morning Session: Structuring Your Speech

The day commenced with an exploration of speech structure, covering the introduction, body, and conclusion. Techniques for organizing content were shared, along with guidance on creating impactful openings and closings.

Afternoon Session: Message Clarity and Conciseness

Participants delved into crafting clear and concise messages, focusing on impactful word choice and eliminating unnecessary details. Practical exercises were conducted to refine their ability to deliver succinct messages

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FIG 3: RESOURCE PESRON & STUDENTS IN

Day 3: Engaging Your Audience

Morning Session:Captivating Presentation Techniques

The day centered around captivating presentation techniques, including effective use of visual aids and the art of storytelling. Participants engaged in interactive elements to refine their skills in keeping an audience's attention.

Afternoon Session: Handling Q&A Sessions

Strategies for confidently addressing questions and managing challenging queries were discussed. Participants practiced maintaining composure during Q&A sessions, ensuring a poised and responsive approach.

Day 4: Building Confidence and Overcoming Challenges

Morning Session:

Techniques for calming nerves, visualization, and positive self-talk were explored to build participants' self-confidence. Practical exercises were employed to reinforce these strategies and alleviate nervousness.

Afternoon Session: Dealing with Presentation Challenges

Participants delved into handling unexpected challenges, such as technical issues, and adapting presentations on the spot. The session focused on turning mistakes into opportunities for growth and resilience.

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Day 5: Advanced Techniques and Individual Feedback

Morning Session:Advanced Public Speaking Techniques

The day's content revolved around advanced techniques like persuasion, influencing skills, and effective use of humor. Participants gained insights into adapting their approach to different audience types.

Afternoon Session: Individual Speech Presentations and Feedback

In the final session, participants delivered individual speeches, receiving constructive feedback from instructors and peers. This personalized feedback provided tailored tips for improvement, rounding off the course with practical application and growth.

This comprehensive 5-day public speaking and communication skills course provided participants with a transformative journey, instilling essential foundations on day one and progressively advancing to advanced techniques by the course's culmination. Through a combination of theory and hands-on practice, participants honed their ability to structure compelling messages, engage diverse audiences, and confidently navigate challenging Q&A sessions. The focus on building confidence and overcoming presentation challenges empowered individuals to embrace nervousness and transform setbacks into opportunities for growth. The course's finale, featuring individual speech presentations and personalized feedback, showcased the participants' remarkable progress, emphasizing the practical application of acquired skills. As a result, each participant departed with not only enhanced public speaking proficiency but also a newfound confidence to communicate effectively in various professional and personal settings.

Coordinator
Mr. Girisha G A

Mr. Vivekavardhana Reddy
HOD

Dr. H N Thippeswamy
PRINCIPAL

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ABOUT COLLEGE

City Engineering College, Bangalore affiliated to Visvesvaraya Technological University (VTU) is centrally located in Bangalore. The College has expanded over the last 19 years with sophisticated infrastructure as a part of the Institution's commitment to provide higher quality education in the area of Engineering. The highly facilitated landmark building – provides a perfect ambience for creativity and learning. City Engineering College is known for its academic excellence, friendly welcoming atmosphere and community spirit. Over large number of full time students study here in a wide range of programs. It is a centre of talented, experienced teachers who inspire and energize the students to achieve the best.

CHIEF PATRON

Dr. K R Paramahamsa,
Chairman,
AMC-City - Brooklyn Group of institution

PATRONS

Dr. H N Thippeswamy,
Principal,CEC

Dr. Jyothi P,
Vice Principal , CEC

CONVENER

Mr. Vivekavardhana Reddy,
HOD CSE

COORDINATORS

MR. GIRISHA G A,
ASSISTANT PROFESSOR,
DEPARTMENT OF CSE

MRS. LAXMI M C,
ASSISTANT PROFESSOR,
DEPARTMENT OF CSE

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CITY ENGINEERING COLLEGE

Approved by AICTE New Delhi &
Affiliated by VTU, Belagavi
Doddakallasandra, Off Kanakapura Main Road,
Bangalore - 560 062.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Add On Course
On

PUBLIC SPEAKING SKILLS AND PRESENTATION

28th March to 1st April 2022

RESOURCE PERSON

Ms Anagha S
Assistant Professor
Department of PG Studies & research in Psychology, Kateel Ashok Pai Memorial College.
Clinical Psychologist, Manasa Nursing Home, Shimogga.

ABOUT THE DEPARTMENT

The Department of Computer Science & Engineering was started in the year 2001 is known for imparting Quality education and carrying out cutting edge research. In addition to the UG program, PG CSE program and Research facilities for Ph.D. The department offers undergraduate program and has a comprehensive curriculum on topics related to software and hardware with an emphasis on theoretical and practical learning. It has well equipped, state of the art laboratories supported by highspeed Internet and wireless networks.

ABOUT THE COURSE

The "Value Added Course on Public Speaking and Presentation Skills" is designed to enhance participants' abilities in delivering impactful speeches and presentations. It offers a comprehensive approach to mastering both fundamental and advanced aspects of public speaking. The course covers essential topics such as overcoming public speaking fears, effective communication techniques, speech structuring, and engaging presentation methods. Participants learn to utilize visual aids, storytelling, and interactive elements to captivate their audience. The course emphasizes hands-on practice, providing opportunities for delivering speeches and receiving constructive feedback. Additionally, it addresses confidence-building strategies and managing presentation challenges. Overall, the course aims to equip learners with practical skills and confidence to excel in various public speaking contexts.

COURSE OUTCOMES

- Participants will master advanced communication techniques, including persuasion, influencing skills, and humor.
- Participants will gain confidence in public speaking and adapt to unexpected challenges with resilience.
- Participants will apply theoretical knowledge effectively in diverse practical scenarios.
- Participants will use personalized feedback for continuous improvement in their communication skills.

ABOUT RESOURCE PERSON

Mrs. Neha Signal is having 14 years of teaching experience, presently working as a Professor in the Dept. of Computer Science, CHRIST (Deemed to be university). She obtained her PhD Degree from VTU in 2021 and M. Tech (Regular) from banasthali university, Rajasthan. Her teaching and research interests are in the field of web services. She is a professional member of ISTE and IEEE society. Neha Singhal published various scoups indexed and ESCI indexed papers in various journals. She delivered various technical talks and invited as a resource person to the several Bangalore colleges. She authored a text book on Industry 4.0 index in Scopus. She received the funding for more than 5 projects from various funding agencies during 2018 to now. She is awarded for the exemplary services at RRCE. She is nominated as a research pannel member by christ university.

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certificate

of participation

This certificate is proudly awarded to

R A RAJESH

From the Department of Computer Science and Engineering for participation in the course on “Public Speaking and Presentation Skills” under Value Added course from 28-03-22 to 01-04-2022

Head of Department

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Principal

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SUBRAMANI M

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Department of Computer Science and Engineering

Academic Year 2021- 2022

Add – on Course

Blockchain Basics

17-01-2022 to 21-01-2022

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CITY ENGINEERING COLLEGE
Kanakapura Main Road, Bangalore-560061

CITY ENGINEERING COLLEGE

Date: 08-01-2022

To

The Principal
City Engineering College
Bangalore

Sub: Regarding Permission to conduct an Add-on Course

Respected Sir,

We would like to conduct a Add-on course on "**Blockchain Basics**" for third year students from 17/01/2022 to 21/01/2022. The blockchain basics course is a comprehensive academic program that integrates practical, real-world applications into the curriculum. It covers industry-relevant topics such as smart contract development, security protocols, and real-world use cases, providing students with practical experience and insights. So, I request you to permit us to conduct this course. Kindly do the needful.

Mr. Vivekavardhana Reddy
HOD
Department of CSE

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CITY ENGINEERING COLLEGE

Department of Computer Science and Engineering

Ref No: CSE/CSE/C1/1.2.1/ACY 2021-22/OR/03 Date: 12/01/2022

CIRCULAR

Sub: Conducting a Add on course

This is to inform all the concerned that a 5-day add on course on **Block Chain Basics** by **Dr. SWETHA.P,** Associate Professor, Computer Science and Engineering, Global Academy of Technology, Bangalore has been organized from 17/01/2022 to 21/01/2022. All the students have to participate compulsorily for the same. Attendance will be viewed strictly. All the students are hereby instructed to attend the session and get the maximum benefits.

Mr. Vivekvardhana Reddy
HOD
Department of CSE

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Department of Computer Science and Engineering

Add-on Course "Blockchain Basics"

Date: 17-01-22 to 21-01-22

Schedule

Academic Year: 2021-22 Venue: CSE Seminar Hall

Date	Session 1 (9:15 – 11:15)	Session 2 (11:15 – 1:15)		Session 3 (2:00 – 4:00)
17-01-22	Introduction to Blockchain Technology	Overview of Cryptocurrencies	Lunch Break (1: 15 - 2: 00)	Components of Blockchain Architecture
18-01-22	- Mining Process in Blockchain - Node Validation and Consensus	Introduction to Ethereum		Writing and Deploying Smart Contracts
19-01-22	Private and Public Key Cryptography	Auditing and Testing Smart Contracts		Blockchain Use Cases in Different Industries
20-02-22	Interoperability between Blockchains	NFTs and Future Trends		Blocks, Chains, Decentralization
21-01-22	Bitcoin, Altcoins, and Tokens	Smart Contracts and DApps		Q&A and Discussion

Coordinator
Mr Ramesh B

Mr. Vivekavardhana Reddy
HOD

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Department of Computer Science and Engineering

Add-on Course "Blockchain Basics"

Syllabus

Course Objectives

- Understand Blockchain Fundamentals: Gain a comprehensive understanding of blockchain technology and key concepts such as blocks, chains, and decentralization.
- Learn Blockchain Architecture and Mechanisms: Understand the components of blockchain architecture and various consensus mechanisms like Proof of Work and Proof of Stake.
- Develop Skills in Smart Contracts: Learn about smart contracts, including writing, deploying, and use cases for smart contracts.
- Explore Blockchain Security and Best Practices: Recognize the importance of security in blockchain and learn about best practices for smart contract development and auditing.
- Examine Blockchain Applications and Future Trends: Investigate real-world use cases of blockchain across different industries and explore emerging trends like NFTs and interoperability.

Course Content

Module	Content
1	- Introduction to Blockchain Technology - Key Concepts: Blocks, Chains, Decentralization - Evolution of Systems
	- Overview of Cryptocurrencies - Bitcoin, Altcoins, and Tokens
	- Components of Blockchain Architecture - Consensus Mechanisms: Proof of Work vs. Proof of Stake - Smart Contracts and DApps
	- Mining Process in Blockchain - Node Validation and Consensus - Forks and Network Upgrades
2	- Introduction to Ethereum - Ether (ETH) and Gas- Ethereum Virtual Machine (EVM)
	- What are Smart Contracts? - Writing and Deploying Smart Contracts - Use Cases for Smart Contracts
	- Importance of Security in Blockchain - Common Threats and Vulnerabilities - Private and Public Key Cryptography
	- Best Practices for Smart Contract Development - Auditing and Testing Smart Contracts - Security Tokens and Standards
3	- Blockchain Use Cases in Different Industries - Real-world Examples and Case Studies

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	- Scalability Solutions - Interoperability between Blockchains - NFTs and Future Trends
	What are Smart Contracts? - Writing and Deploying Smart Contracts - Use Cases for Smart Contracts
4	- Introduction to Blockchain Technology - Key Concepts: Blocks, Chains, Decentralization - Evolution of Systems
	- Overview of Cryptocurrencies - Bitcoin, Altcoins, and Tokens
	- Components of Blockchain Architecture - Consensus Mechanisms: Proof of Work vs. Proof of Stake - Smart Contracts and DApps
5	- Mining Process in Blockchain - Node Validation and Consensus - Forks and Network Upgrades
	- Introduction to Ethereum - Ether (ETH) and Gas - Ethereum Virtual Machine (EVM)
	- Q&A and Discussion - Course Recap and Concluding Remarks

Coordinator
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Department of Computer Science and Engineering

Add-on Course "Blockchain Basics"

Date: 17-01-22 to 21-01-22

Resource Person Profile

Dr. Swetha P is a highly accomplished professional in the field of Computer Science and Engineering, with a strong academic background and extensive experience in teaching and research. She has progressed from a Lecturer to an Associate Professor at various prestigious institutions in Bengaluru, demonstrating her dedication and expertise in the field.

Dr. Swetha's academic achievements include completing a PhD in "Customer Churn Prediction in the Telecom domain using Machine Learning Algorithms," and obtaining M.Tech and B.E degrees in Computer Engineering and Information Science & Engineering, respectively. She has also published numerous papers in international journals and conferences, authored a textbook, and participated in academic activities such as reviewing for international conferences and attending faculty development programs.

In addition to her academic pursuits, Dr. Swetha has actively contributed to the academic community by guiding funded projects, receiving awards for her research, and filing patents related to artificial intelligence and IoT technology. She has also taken on various roles and responsibilities within the institutions she has worked for, including coordinating college events, serving as a Squad member for Autonomous Examination, and participating in professional organizations such as LMISTE, IAENG, IACSIT, and IEEE.

Dr. Swetha's areas of interest and expertise include Machine Learning, Big Data, Data Mining, IoT, and Cloud computing, aligning with her extensive teaching experience in subjects such as Data Science, Machine Learning, Computer Networks, and more. Her personal strengths include a willingness to work diligently, strong leadership and communication skills, optimism, and good listening abilities, all of which contribute to her success in academia.

Overall, Dr. Swetha's resume reflects her profound expertise, dedication to academia, and significant contributions to the field of Computer Science and Engineering, positioning her as a highly qualified professional in her domain.

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Academic Year: 2021-2022 **Date: 17-01-22 to 21-01-22**

Add-on Course "Blockchain Basics"

List of students enrolled

SL NO	USN	NAME		SL NO	USN	NAME
1	1CE18CS007	ANISHA SAMPANNA		31	1CE19CS018	CHANDAN KUMAR C
2	1CE18CS032	KAVANA SAGAR H		32	1CE19CS019	D Y CHANDANA
3	1CE18CS038	LAKSHMEESH D		33	1CE19CS020	CHANDINI R P
4	1CE18CS043	MEZY SANDRA DSOUZA		34	1CE19CS021	CHARANSIMHA D
5	1CE18CS051	NIRANJAN M		35	1CE19CS022	CHETAN S
6	1CE18CS063	RAHUL KUMAR		36	1CE19CS023	CHETHAN R
7	1CE18CS066	SAHANA R		37	1CE19CS024	CHETHANRAJ H
8	1CE18CS072	SHILPA N		38	1CE19CS025	CHIRANJEEVI V
9	1CE18CS074	SHRAAVYA S		39	1CE19CS026	DARSHAN K
10	1CE18CS076	SHREYAS B S GOWDA		40	1CE19CS027	DEEPAK JADON
11	1CE18CS077	SHREYAS V		41	1CE19CS028	DEEPTHY RASHMI R
12	1CE18CS091	ULLAS M		42	1CE19CS029	DHANUSH S
13	1CE18CS096	VARSHA H		43	1CE19CS030	DIVYA S A
14	1CE19CS001	AAKASH T E		44	1CE19CS031	FOZAIL AHMED
15	1CE19CS002	ACHYUTH MAHESH HEGDE		45	1CE19CS032	GEETHANSH P
16	1CE19CS003	AFRID PASHA		46	1CE19CS033	HARISH BABU K P
17	1CE19CS004	AISHWARYA B M		47	1CE19CS034	HARSHITH G R
18	1CE19CS005	AISHWARYA C		48	1CE19CS035	HEMANTH V
19	1CE19CS006	AMIR REHAN		49	1CE19CS037	IQRA FATHIMA
20	1CE19CS007	AMITH SINGH M		50	1CE19CS038	JAANESHWAR DA
21	1CE19CS008	ANANYA BHOMBORE		51	1CE19CS039	JEEVAN M
22	1CE19CS009	APOORVA R SHET		52	1CE19CS040	JYOTHI SHREE S R
23	1CE19CS010	ARSHAD ULLA Z		53	1CE19CS041	KAVANA B
24	1CE19CS011	ARTEE KUMARI R		54	1CE19CS043	KEERTHI KUMARI
25	1CE19CS012	ASHWINI B		55	1CE19CS044	KISHAN GOWDA
26	1CE19CS013	B M PUNEETH		56	1CE19CS045	KRITHIKA N KOUSHIK
27	1CE19CS014	BHANU PRAKASH R		57	1CE19CS046	KRUTTIKA BHOMKAR
28	1CE19CS015	BHAVANA S		58	1CE19CS047	MANASA R
29	1CE19CS016	BHOLAY NATH SINGH		59	1CE19CS048	MANOHAR M
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67	1CE19CS056	MRUDULA S PRASAD
68	1CE19CS057	MULGE SHIVA RAHUL KUMAR
69	1CE19CS058	NISHANTH NAYAKA N R
70	1CE19CS059	NITHIN RAAJ GOWDA S
71	1CE19CS060	POOJA SURESH
72	1CE19CS061	POOJASHREE K
73	1CE19CS062	PRABHANJAN V KOLAR
74	1CE19CS063	PRASHANTH K
75	1CE19CS066	R FAZEELA FATHIMA
76	1CE19CS067	RAHUL K R
77	1CE19CS068	RAKSHANDA AIMAN GOLANDAZ
78	1CE19CS069	RAKSHITHA C R
79	1CE19CS070	RAKSHITHA G M
80	1CE19CS071	RATNADEEP ANIL MORE
81	1CE19CS072	ROHIT GEHLOT
82	1CE19CS073	SACHIN H M
83	1CE19CS074	SAGAR T R
84	1CE19CS075	SAHANA GOPALKRISHNA HEBBAR
85	1CE19CS076	SAIMA SHEIK
86	1CE19CS077	SALFIYA MUSKAAN

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88	1CE19CS079	SANGEETHA M .S
89	1CE19CS080	SHALINI R
90	1CE19CS081	SHANKARLINGA M MATTIMANI
91	1CE19CS082	SHARADHI SHETTY D
92	1CE19CS083	SHIVAPRASAD M B
93	1CE19CS084	SHIVARAJ HIREMATH
94	1CE19CS085	SPOORTHI H M
95	1CE19CS086	SRISHTI SHARMA
96	1CE19CS087	SRIVATSA S
97	1CE19CS088	SRUSTI K G
98	1CE19CS089	SUMAN S
99	1CE19CS090	SUMMAIYA TAJ A
100	1CE19CS091	SUMUKH K
101	1CE19CS092	SYED MUTAIBULLA
102	1CE19CS094	TARUN G
103	1CE19CS095	TAUQEER AHMED
104	1CE19CS096	VEERESH BUDESHREDDY PATIL
105	1CE19CS097	VEERKUMARSOMANAGOWDABIR ADARA
106	1CE19CS098	VIDYA D
107	1CE19CS099	VINITHA V
108	1CE19CS100	VISHNU P
109	1CE19CS101	VISHRUTHA V
110	1CE19CS102	VIVEK B U
111	1CE19CS103	X SEMANTHA MERCY
112	1CE20CS400	CHAKALA ARCHANA
113	1CE20CS401	PRADEEP K S

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Attendance List

SL NO	USN	NAME	17-1-22	18-1-22	19-1-22	20-1-22	21-1-22	
1	1CE18CS007	ANISHA SAMPANNA	P	P	P	P	P	Anisha
2	1CE18CS032	KAVANA SAGAR H	P	P	P	P	P	Kavana
3	1CE18CS038	LAKSHMEESH D	P	P	P	P	P	Lakshmeesh
4	1CE18CS043	MEZY SANDRA DSOUZA	P	A	P	P	P	Mezy
5	1CE18CS051	NIRANJAN M	P	P	P	P	P	Niranjan
6	1CE18CS063	RAHUL KUMAR	P	P	P	A	P	RK
7	1CE18CS066	SAHANA R	P	P	P	P	P	Sahana
8	1CE18CS072	SHILPA N	P	P	P	P	A	Shilpa
9	1CE18CS074	SHRAAVYA S	P	P	P	P	P	Shraavya S
10	1CE18CS076	SHREYAS B S GOWDA	P	P	P	P	P	ShreyaS.
11	1CE18CS077	SHREYAS V	P	P	P	P	P	SV
12	1CE18CS091	ULLAS M	P	P	A	P	P	Ullas
13	1CE18CS096	VARSHA H	P	P	P	P	P	Vasha
14	1CE19CS001	AAKASH T E	P	P	P	P	P	AKE
15	1CE19CS002	ACHYUTH MAHESH HEGDE	A	P	P	P	P	Achyuth
16	1CE19CS003	AFRID PASHA	P	P	P	P	P	Afrid
17	1CE19CS004	AISHWARYA B M	P	P	P	P	P	Aish
18	1CE19CS005	AISHWARYA C	P	P	P	P	P	Ashwarya
19	1CE19CS006	AMIR REHAN	P	P	P	A	P	AmiR
20	1CE19CS007	AMITH SINGH M	P	P	P	P	P	Amith
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29	1CE19CS016	BHOLAY NATH SINGH	P	P	P	P	A	Singh
30	1CE19CS017	BINDHUSHREE G	P	P	P	P	P	Bindhu

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32	1CE19CS019	D Y CHANDANA	P	P	P	P	P	DY Chandana
33	1CE19CS020	CHANDINI R P	A	P	P	P	P	Chandini
34	1CE19CS021	CHARANSIMHA D	P	P	P	P	P	Charan
35	1CE19CS022	CHETAN S	P	P	P	P	A	Chetan
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37	1CE19CS024	CHETHANRAJ H	P	P	P	P	P	Chethanraj
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50	1CE19CS038	JAANESHWAR DA	P	P	P	P	P	Jaaneshwar
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68	1CE19CS057	MULGE SHIVA RAHUL KUMAR	P	P	P	P	P	Mulgeshiva
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82	1CE19CS073	SACHIN H M	P	A	P	P	P	Sachin
83	1CE19CS074	SAGAR T R	P	P	P	P	P	Sagar
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85	1CE19CS076	SAIMA SHEIK	A	P	P	P	P	Saima
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100	1CE19CS091	SUMUKH K	P	P	P	P	P	Sumukh
101	1CE19CS092	SYED MUTAIBULLA	P	P	P	P	P	Syed
102	1CE19CS094	TARUN G	P	P	P	P	P	Tarun
103	1CE19CS095	TAUQEER AHMED	P	P	P	P	P	Tauqeer
104	1CE19CS096	VEERESH BUDESHREDDY PATIL	A	P	P	P	P	Veeresh
105	1CE19CS097	VEERKUMARSOMANAG OWDABIRADARA	P	P	P	P	P	Veerkumar
106	1CE19CS098	VIDYA D	P	P	P	P	P	Vidya
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Department of Computer Science and Engineering

Academic Year: 2021-2022 **Date: 17-01-22 to 21-01-22**

Add-on Course "Blockchain Basics"

Assessment Questions

1. **What is blockchain?**
   a. A type of cryptocurrency
   b. A distributed ledger technology
   c. A computer programming language
   d. A cloud computing service
2. **Which of the following is a key characteristic of blockchain?**
   a. Centralized control
   b. Transparent and tamper-resistant
   c. Limited scalability
   d. Offline data storage
3. **What is the primary purpose of a smart contract in blockchain?**
   a. Record financial transactions
   b. Execute predefined rules automatically
   c. Provide a secure login mechanism
   d. Encrypt communication between nodes
4. **In blockchain, what is the role of miners?**
   a. Record transactions in the ledger
   b. Verify transactions and add them to the blockchain
   c. Manage the central authority
   d. Develop smart contracts
5. **What consensus algorithm is commonly used in the Bitcoin blockchain?**
   a. Proof of Work (PoW)
   b. Proof of Stake (PoS)
   c. Delegated Proof of Stake (DPoS)
   d. Byzantine Fault Tolerance (BFT)
6. **Which type of blockchain is permissionless and open to the public?**
   a. Private blockchain
   b. Consortium blockchain
   c. Public blockchain
   d. Hybrid blockchain
7. **What is a "fork" in the context of blockchain?**
   a. A software bug
   b. A split in the blockchain, creating two separate chains
   c. A cryptographic key
   d. A type of smart contract
8. **What does the term "immutable" mean in the context of blockchain?**
   a. Changeable and flexible
   b. Cannot be altered or deleted
   c. Requires permission to access
   d. Encrypted for security

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9. **Which cryptocurrency is associated with the concept of "smart contracts"?**
   a. Bitcoin
   b. Ethereum
   c. Ripple
   d. Litecoin
10. **What is the function of a cryptographic hash in blockchain?**
   a. Encrypting private keys
   b. Securing communication between nodes
   c. Creating a unique identifier for data
   d. Storing digital signatures
11. **What is a "genesis block" in a blockchain?**
   a. The last block in the chain
   b. The first block in the chain
   c. A special block containing transaction details
   d. A block with encrypted data
12. **Which term is used to describe the process of validating and confirming transactions in a blockchain network?**
   a. Confirmation consensus
   b. Transaction verification
   c. Block approval
   d. Consensus mechanism
13. **What is the purpose of a "private key" in blockchain cryptography?**
   a. Encrypting blockchain data
   b. Verifying the identity of a user
   c. Generating new blocks
   d. Initiating a smart contract
14. **Which of the following is NOT a potential use case for blockchain technology?**
   a. Supply chain management
   b. Voting systems
   c. Weather forecasting
   d. Digital identity verification
15. **What role does a "double-spending problem" pose in traditional digital currencies, and how does blockchain address it?**
   a. It allows users to spend the same funds twice; blockchain prevents double-spending through consensus mechanisms.
   b. It prevents users from spending the same funds twice; blockchain resolves this issue through decentralized verification and consensus.
16. **Which blockchain feature allows for the removal of an incorrect transaction record from the ledger?**
   a. Decentralization
   b. Immutability
   c. Transparency
   d. Consensus

17. **In the context of blockchain, what does the term "gas" refer to?**
   a. The fuel or fee required to execute operations on the Ethereum network

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b. A type of cryptocurrency
c. The energy source for mining operations
d. A unit of measurement for blockchain storage

18. **What is a "51% attack" in the context of blockchain security?**
    a. A majority consensus among participants
    b. A type of cryptographic attack
    c. When a single entity controls more than half of the network's mining power, potentially compromising its integrity.
    d. A smart contract vulnerability
19. **Which consensus algorithm aims to achieve agreement through a process of participants taking turns proposing and voting on blocks?**
    a. Proof of Work (PoW)
    b. Proof of Stake (PoS)
    c. Delegated Proof of Stake (DPoS)
    d. Practical Byzantine Fault Tolerance (PBFT)
20. **What is the primary advantage of using a "sidechain" in a blockchain network?**
    a. Increased security
    b. Faster transaction processing
    c. Enhanced privacy d. Improved scalability

Answers:

1.b, 2. b, 3. b, 4. b, 5. a, 6. c, 7. b, 8. b, 9. b, 10. c 11. b, 12. d, 13. b, 14. c, 15. b, 16. b, 17. a, 18. c, 19. c, 20. B

Note: Each question carries 2 marks

Coordinator
Mr Ramesh B

Mr. Vivekavardhana Reddy
HOD

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Kanakapura Main Road, Bangalore-560061

CITY ENGINEERING COLLEGE

Department of Computer Science and Engineering

Academic Year: 2021-2022 **Date: 17-01-22 to 21-01-22**

Add-on Course "Blockchain Basics"

Assessment Marks

SL NO	USN	NAME	Marks	SL NO	USN	NAME	Marks
1	1CE18CS007	ANISHA SAMPANNA	80	32	1CE19CS019	D Y CHANDANA	90
2	1CE18CS032	KAVANA SAGAR H	75	33	1CE19CS020	CHANDINI R P	95
3	1CE18CS038	LAKSHMEESH D	70	34	1CE19CS021	CHARANSIMHA D	90
4	1CE18CS043	MEZY SANDRA DSOUZA	65	35	1CE19CS022	CHETAN S	95
5	1CE18CS051	NIRANJAN M	70	36	1CE19CS023	CHETHAN R	80
6	1CE18CS063	RAHUL KUMAR	70	37	1CE19CS024	CHETHANRAJ H	85
7	1CE18CS066	SAHANA R	80	38	1CE19CS025	CHIRANJEEVI V	75
8	1CE18CS072	SHILPA N	75	39	1CE19CS026	DARSHAN K	90
9	1CE18CS074	SHRAAVYA S	90	40	1CE19CS027	DEEPAK JADON	90
10	1CE18CS076	SHREYAS B S GOWDA	90	41	1CE19CS028	DEEPTHY RASHMI R	70
11	1CE18CS077	SHREYAS V	85	42	1CE19CS029	DHANUSH S	75
12	1CE18CS091	ULLAS M	75	43	1CE19CS030	DIVYA S A	70
13	1CE18CS096	VARSHA H	80	44	1CE19CS031	FOZAIL AHMED	80
14	1CE19CS001	AAKASH T E	80	45	1CE19CS032	GEETHANSH P	85
15	1CE19CS002	ACHYUTH MAHESH HEGDE	75	46	1CE19CS033	HARISH BABU K P	80
16	1CE19CS003	AFRID PASHA	90	47	1CE19CS034	HARSHITH G R	95
17	1CE19CS004	AISHWARYA B M	90	48	1CE19CS035	HEMANTH V	90
18	1CE19CS005	AISHWARYA C	95	49	1CE19CS037	IQRA FATHIMA	80
19	1CE19CS006	AMIR REHAN	100	50	1CE19CS038	JAANESHWAR DA	90
20	1CE19CS007	AMITH SINGH M	90	51	1CE19CS039	JEEVAN M	95
21	1CE19CS008	ANANYA BHOMBORE	90	52	1CE19CS040	JYOTHI SHREE S R	90
22	1CE19CS009	APOORVA R SHET	80	53	1CE19CS041	KAVANA B	85
23	1CE19CS010	ARSHAD ULLA Z	80	54	1CE19CS043	KEERTHI KUMARI	80
24	1CE19CS011	ARTEE KUMARI R	75	55	1CE19CS044	KISHAN GOWDA	80
25	1CE19CS012	ASHWINI B	85	56	1CE19CS045	KRITHIKA N KOUSHIK	75
26	1CE19CS013	B M PUNEETH	75	57	1CE19CS046	KRUTTIKA BHOMKAR	90
27	1CE19CS014	BHANU PRAKASH R	90	58	1CE19CS047	MANASA R	95
28	1CE19CS015	BHAVANA S	80	59	1CE19CS048	MANOHAR M	100
29	1CE19CS016	BHOLAY NATH SINGH	85	60	1CE19CS049	MANOJ M K	95
30	1CE19CS017	BINDHUSHREE G	80	61	1CE19CS050	MANOJ R	100
31	1CE19CS018	CHANDAN KUMAR C	75	62	1CE19CS051	MARIA MONICA P	90

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SL. No			Marks	SL. No			Marks
63	1CE19CS052	MOHAMMED UZAIR BAIG	80	87	1CE19CS078	SAMBANGI SAI TEJA	90
64	1CE19CS053	MOHAMMED SAMEER	85	88	1CE19CS079	SANGEETHA M .S	75
65	1CE19CS054	MONIKA J	90	89	1CE19CS080	SHALINI R	85
66	1CE19CS055	MRITUNJAY MISHRA	95	90	1CE19CS081	SHANKARLINGA M MATTIMANI	100
67	1CE19CS056	MRUDULA S PRASAD	100	91	1CE19CS082	SHARADHI SHETTY D	90
68	1CE19CS057	MULGE SHIVA RAHUL KUMAR	75	92	1CE19CS083	SHIVAPRASAD M B	80
69	1CE19CS058	NISHANTH NAYAKA N R	80	93	1CE19CS084	SHIVARAJ HIREMATH	75
70	1CE19CS059	NITHIN RAAJ GOWDA S	85	94	1CE19CS085	SPOORTHI H M	70
71	1CE19CS060	POOJA SURESH	90	95	1CE19CS086	SRISHTI SHARMA	70
72	1CE19CS061	POOJASHREE K	95	96	1CE19CS087	SRIVATSA S	80
73	1CE19CS062	PRABHANJAN V KOLAR	90	97	1CE19CS088	SRUSTI K G	80
74	1CE19CS063	PRASHANTH K	85	98	1CE19CS089	SUMAN S	65
75	1CE19CS066	R FAZEELA FATHIMA	90	99	1CE19CS090	SUMMAIYA TAJ A	70
76	1CE19CS067	RAHUL K R	85	100	1CE19CS091	SUMUKH K	90
77	1CE19CS068	RAKSHANDA AIMAN GOLANDAZ	80	101	1CE19CS092	SYED MUTAIBULLA	80
78	1CE19CS069	RAKSHITHA C R	85	102	1CE19CS094	TARUN G	80
79	1CE19CS070	RAKSHITHA G M	90	103	1CE19CS095	TAUQEER AHMED	90
80	1CE19CS071	RATNADEEP ANIL MORE	75	104	1CE19CS096	VEERESH BUDESHREDDY PATIL	75
81	1CE19CS072	ROHIT GEHLOT	70	105	1CE19CS097	VEERKUMARSOMANA GOWDABIRADARA	75
82	1CE19CS073	SACHIN H M	70	106	1CE19CS098	VIDYA D	70
83	1CE19CS074	SAGAR T R	80	107	1CE19CS099	VINITHA V	80
84	1CE19CS075	SAHANA GOPALKRISHNA HEBBAR	85	108	1CE19CS100	VISHNU P	80
85	1CE19CS076	SAIMA SHEIK	80	109	1CE19CS101	VISHRUTHA V	85
86	1CE19CS077	SALFIYA MUSKAAN	80	110	1CE19CS102	VIVEK B U	90
				111	1CE19CS103	X SEMANTHA MERCY	85
				112	1CE20CS400	CHAKALA ARCHANA	90
				113	1CE20CS401	PRADEEP K S	85

Coordinator
Mr Ramesh B

Mr. Vivekavardhana Reddy
HOD

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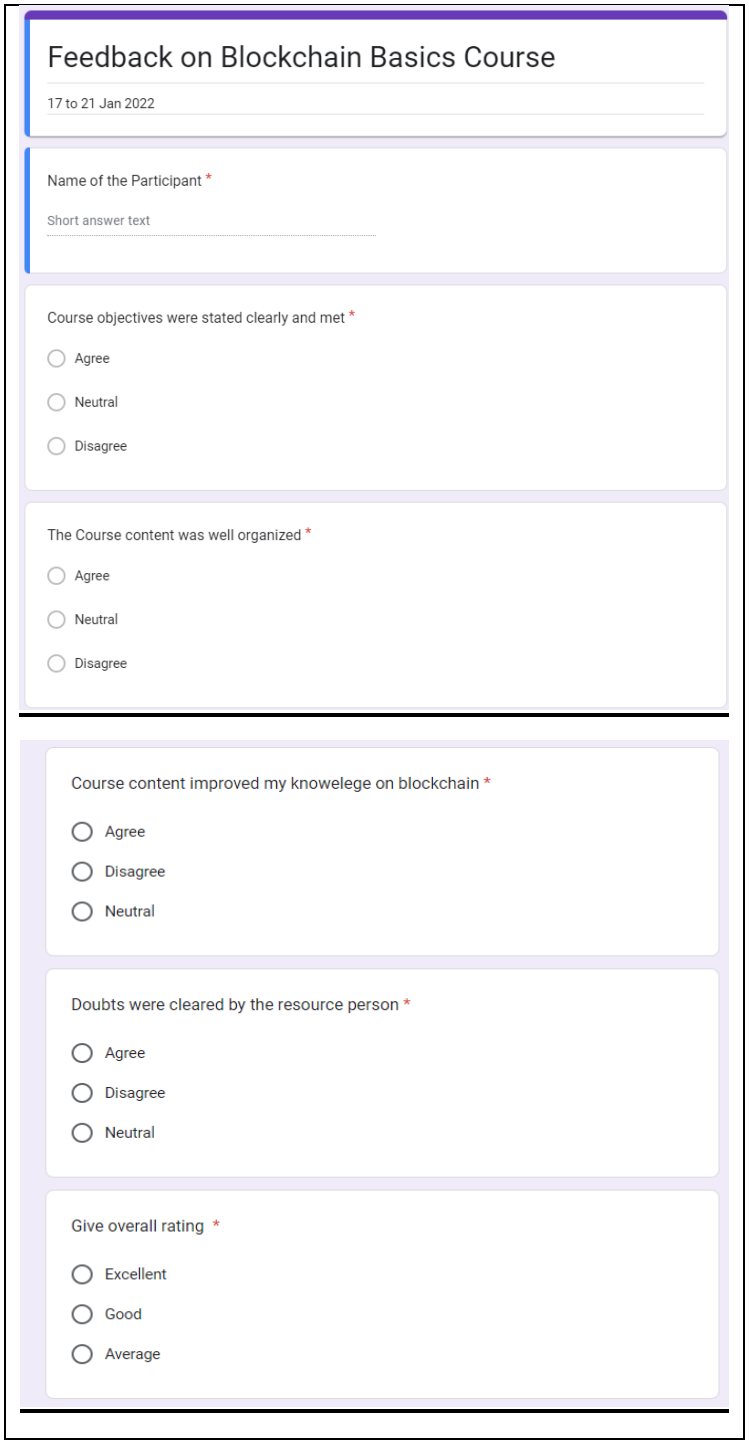
Department of Computer Science and Engineering

Academic Year: 2021-2022 **Date: 17-01-22 to 21-01-22**



Feedback on Blockchain Basics Course

17 to 21 Jan 2022

Name of the Participant *

Short answer text

Course objectives were stated clearly and met *

- Agree
- Neutral
- Disagree

The Course content was well organized *

- Agree
- Neutral
- Disagree

Course content improved my knowelege on blockchain *

- Agree
- Disagree
- Neutral

Doubts were cleared by the resource person *

- Agree
- Disagree
- Neutral

Give overall rating *

- Excellent
- Good
- Average

FIG1: SCREENSHOT OF FEEDBACK

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Department of Computer Science and Engineering

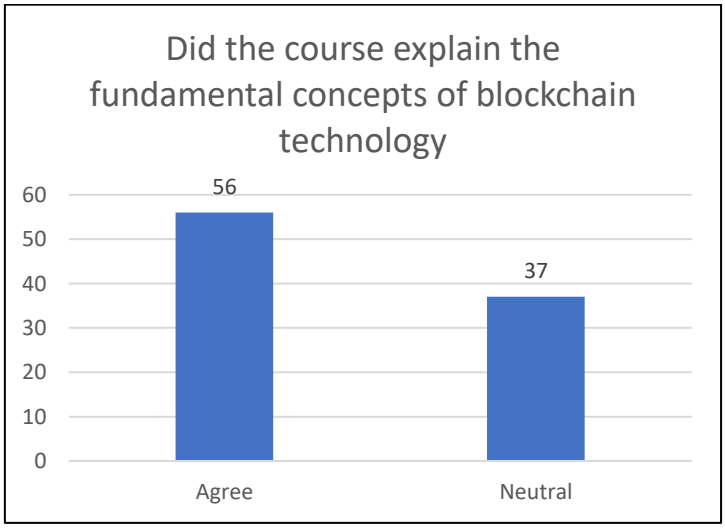
Academic Year: 2021-2022 **Date: 17-01-22 to 21-01-22**

Add-on Course "Blockchain Basics"

Student Feedback Analysis

Sample Feedback

Timestamp	Name of the Participant	Did the course explain the fundamental concepts of blockchain technology	Were the examples and use cases of blockchain applications relevant and informative	Course content improved my knowledge on blockchain	Doubts were cleared by the resource person	Give overall rating
1/22/2022 14:31:32	SHREYAS B S GOWDA	Agree	Neutral	Agree	Disagree	Excellent
1/22/2022 14:32:03	ANISHA SAMPANNA	Agree	Neutral	Agree	Neutral	Excellent
1/22/2022 14:32:53	LAKSHMEESH D	Agree	Neutral	Agree	Agree	Good
1/22/2022 14:33:28	SHRAAVYA S	Agree	Neutral	Agree	Disagree	Good
1/22/2022 14:33:56	VARSHA H	Agree	Neutral	Agree	Neutral	Excellent
1/22/2022 14:36:16	SAHANA R	Agree	Neutral	Agree	Neutral	Excellent
1/22/2022 14:53:46	AFRID PASHA	Agree	Neutral	Agree	Neutral	Good
1/22/2022 14:54:22	MEZY SANDRA DSOUZA	Neutral	Agree	Neutral	Neutral	Good



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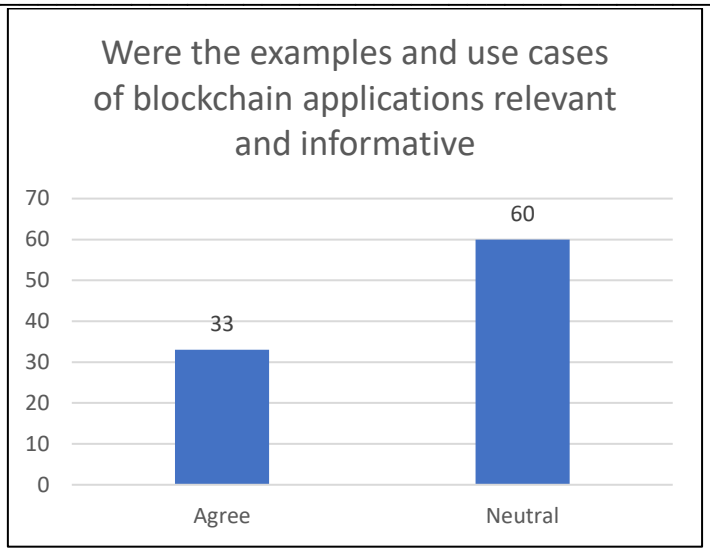

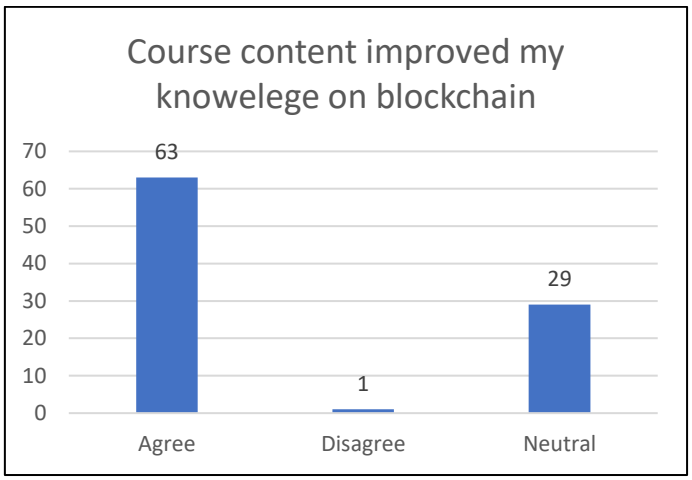

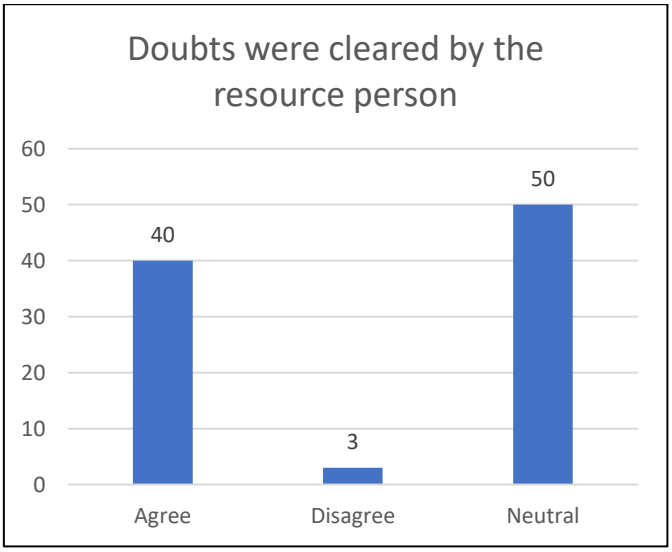

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FIG 2: FEEDBACK ANALYSIS

Course Outcomes

1. Comprehensive Knowledge of Blockchain Technology: Participants will have a thorough understanding of blockchain technology and its foundational concepts.
2. Proficiency in Blockchain Architecture: Participants will be proficient in blockchain architecture, consensus mechanisms, and mining processes.
3. Capability to Develop and Deploy Smart Contracts: Participants will be able to write, deploy, and utilize smart contracts on the Ethereum platform.
4. Enhanced Security Awareness and Practices: Participants will be knowledgeable about blockchain security threats, vulnerabilities, and best practices.
5. Insight into Industry Applications and Trends: Participants will gain insight into various industry applications of blockchain technology and future trends.

Coordinator
Mr Ramesh B

Mr. Vivekavardhana Reddy

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Department of Computer Science and Engineering

A Report on Add-on Course "Blockchain Basics"

A five-day Add on Course on **Block Chain Basics** was organised by the Department of Computer Science and Engineering from 17/01/2022 to 21/01/2022 for Computer Science and Engineering students in the Project Laboratory. **Dr SWETHA.P,** Associate Professor, Computer Science and Engineering, Global Academy of Technology **Bangalore** was the resource person. The event was coordinated by Archana Bhat, Assistant Professor, CSE and Tejaswini, Assistant Professor, CSE.

Day 1: Understanding the Basics
Morning Session:

The event began with a formal inaugural function. **Dr. H N Thippeswamy, Principal CEC and Mr. Vivekavardhana Reddy ,HOD of CSE** were present during the inauguration. The program began by seeking the blessings of Almighty with invocation and lighting of lamp. Principal advised the students to utilize the benefits of the course completely.

The topics covered on Day 1 are
This session provided an introduction to blockchain technology, covering key concepts such as blocks, chains, and decentralization. Participants gained insights into the evolution from centralized to decentralized systems.
Afternoon Session:
Participants delved into the world of cryptocurrencies, starting with an overview. The session covered Bitcoin as the pioneer, explored various altcoins and tokens, and discussed their roles in the blockchain ecosystem.

Day 2: How Blockchain Works

Morning Session: Blockchain Architecture

This session focused on the components of blockchain architecture, explaining consensus mechanisms like proof of work and proof of stake. Participants also learned about smart contracts and decentralized applications (DApps).

Afternoon Session: Mining and Validation
The second session covered the process of mining in blockchain, node validation, and the importance of consensus. It also touched upon forks and network upgrades in blockchain systems

Day 3: Ethereum and Smart Contracts
Morning Session:
Participants were introduced to Ethereum, exploring its key features, the native cryptocurrency Ether (ETH), and the Ethereum Virtual Machine (EVM).
Afternoon Session:
This session focused on the concept of smart contracts, explaining how to write and deploy them. Practical use cases for smart contracts were discussed to showcase their real-world applications.

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FIG 3: RESOURCE PERSON ADDRESSING THE

FIG 4: RESOURCE PERSON ADDRESSING THE STAKE HOLDERS

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Day 4: Blockchain Security

Morning Session:

Day 4 started with a session on the importance of security in blockchain. It covered common threats and vulnerabilities, emphasizing the role of private and public key cryptography in securing transactions.

Afternoon Session:

The second session discussed best practices for smart contract development, including auditing and testing. Participants learned how to ensure the security of their blockchain applications.

Day 5: Blockchain in Industry and Future Trends

Morning Session:

This session explored various use cases of blockchain in different industries, including finance, healthcare, and supply chain. Real-world examples and case studies were presented to illustrate the practical applications of blockchain technology.

Afternoon Session:

Day 5 concluded with a session on future trends in blockchain. It covered scalability solutions, interoperability between blockchains, and emerging trends like non-fungible tokens (NFTs) and the future of digital assets.The final session provided an opportunity for participants to recap the course, ask questions, and engage in open discussions. It aimed to reinforce key concepts and allowed for a deeper understanding of blockchain technology.

Throughout this 5-day blockchain basics course, participants gained a comprehensive understanding of the foundational concepts, practical applications, and security considerations within the blockchain ecosystem. The journey began with an exploration of the core principles, transitioned to hands-on sessions on Ethereum and smart contracts, delved into security protocols, and concluded by examining real-world use cases and emerging trends. With a focus on interactive learning and discussions, attendees left equipped with the knowledge to navigate the dynamic landscape of blockchain technology.

Coordinator	**Mr. Vivekavardhana Reddy**	**Dr. H N Thippeswamy**
Mr Ramesh B	**HOD**	**PRINCIPAL**

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ABOUT COLLEGE

City Engineering College, Bangalore affiliated to Visvesvaraya Technological University (VTU) is centrally located in Bangalore. The College has expanded over the last 19 years with sophisticated infrastructure as a part of the Institution's commitment to provide higher quality education in the area of Engineering. The highly facilitated landmark building – provides a perfect ambience for creativity and learning. City Engineering College is known for its academic excellence, friendly welcoming atmosphere and community spirit. Over large number of full time students study here in a wide range of programs. It is a centre of talented, experienced teachers who inspire and energize the students to achieve the best.

CHIEF PATRON

Dr. K R Paramahamsa,
Chairman,
AMC-City - Brooklyn Group of institution

PATRONS

Dr. Thippeswamy H N, Principal,CEC

Dr. Jyothi P, Vice Principal , CEC

CONVENER

Mr. Vivekavardhana Reddy,
HOD CSE

COORDINATORS

Mr. Ramesh B
Assistant Professor,
Department of CSE

Mrs. Tejaswini B N,
Assistant Professor,
Department of CSE

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CITY ENGINEERING COLLEGE

Approved by AICTE New Delhi &
Affiliated by VTU, Belagavi
Doddakallasandra, Off Kanakapura Main Road, Bangalore - 560 062.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Added On Course On

BLOCK CHAIN BASICS

January 17th to 21st 2022

Resource Person

Dr. Shwetha P
Associate Professor
Global Academy of Technology
Bangalore

CONTACT DETAILS

Mr. Ramesh B, Asst.Prof, CSE
PH: +91 99023 81611

About The Department

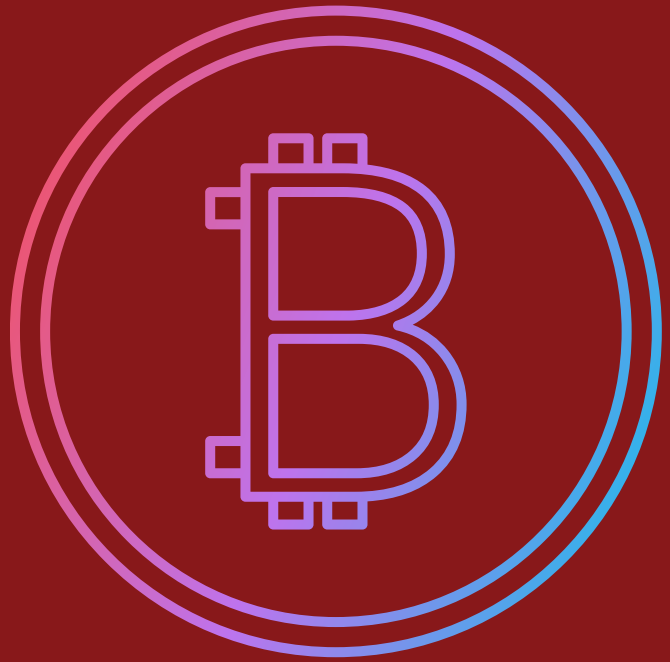
The Department of Computer Science & Engineering was started in the year 2001 is known for imparting Quality education and carrying out cutting edge research. In addition to the UG program, PG CSE program and Research facilities for Ph.D. The department offers undergraduate program and has a comprehensive curriculum on topics related to software and hardware with an emphasis on theoretical and practical learning. It has well equipped, state of the art laboratories supported by highspeed Internet and wireless networks.

About the Course

Blockchain Basics" is designed to be the definitive introduction to blockchain technology, catering to both developers and non-developers. It provides a comprehensive overview of blockchain, ensuring that learners from diverse backgrounds can grasp the fundamental concepts and applications of this transformative technology.

Course Outcomes

- Comprehensive Knowledge of Blockchain Technology
- Proficiency in Blockchain Architecture
- Capability to Develop and Deploy Smart Contracts
- Enhanced Security Awareness and Practices
- Insight into Industry Applications and Trends



About Resource Person

Dr. Swetha P is a highly accomplished professional in the field of Computer Science and Engineering, with a strong academic background and extensive experience in teaching and research. She has progressed from a Lecturer to an Associate Professor at various prestigious institutions in Bengaluru, demonstrating her dedication and expertise in the field.

Dr. Swetha's academic achievements include completing a PhD in "Customer Churn Prediction in the Telecom domain using Machine Learning Algorithms," and obtaining M.Tech and B.E degrees in Computer Engineering and Information Science & Engineering, respectively. She has also published numerous papers in international journals and conferences, authored a textbook, and participated in academic activities such as reviewing for international conferences and attending faculty development programs

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CERTIFICATE

OF APPRECIATION

THE FOLLOWING AWARD IS GIVEN TO

Bindhushree G

From the Department of Computer Science and Engineering for participation in the course on “Block Chain Basics ”under Add on course from 17th to 21st January 2022

At

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Principal

CERTIFICATE

OF APPRECIATION

THE FOLLOWING AWARD IS GIVEN TO

Pradeep K S

From the Department of Computer Science and Engineering for participation in the course on “Block Chain Basics ”under Add on course from 17th to 21st January 2022

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Principal

CERTIFICATE

OF APPRECIATION

THE FOLLOWING AWARD IS GIVEN TO

Tarun G

From the Department of Computer Science and Engineering for participation in the course on “Block Chain Basics ”under Add on course from 17th to 21st January 2022

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Principal

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Pooja Suresh

From the Department of Computer Science and Engineering for participation in the course on “Block Chain Basics ”under Add on course from 17th to 21st January 2022

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OF APPRECIATION

THE FOLLOWING AWARD IS GIVEN TO

Vivek B U

From the Department of Computer Science and Engineering for participation in the course on “Block Chain Basics ”under Add on course from 17th to 21st January 2022

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CERTIFICATE

OF APPRECIATION

THE FOLLOWING AWARD IS GIVEN TO

Vidya D

From the Department of Computer Science and Engineering for participation in the course on “Block Chain Basics ”under Add on course from 17th to 21st January 2022

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Principal

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OF APPRECIATION

THE FOLLOWING AWARD IS GIVEN TO

Sagar T R

From the Department of Computer Science and Engineering for participation in the course on “Block Chain Basics ”under Add on course from 17th to 21st January 2022

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Principal

CITY ENGINEERING COLLEGE

Department of Basic Science

Academic Year 2021 – 2022

Odd Semester

Value added course

On

Entrepreneurship and innovation

Date 14-12-21 to 18-12-21

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CITY ENGINEERING COLLEGE
Kanakapura Main Road, Bangalore-560061

CITY ENGINEERING COLLEGE

Date: 07-12-2021

To

The principal,
City Engineering College,
Bangalore.

Sub: Regarding Permission to conduct Value added course on "Entrepreneurship and innovation".

Respected Sir,

We would like to conduct a certificate course on "Entrepreneurship and innovation" for first year students from Date 14-12-21 to 18-12-21. This course aims to equip students with the knowledge, skills and mind-set required to start, manage and grow innovative business successfully. It helps the student to navigate the challenges of the entrepreneurial world successfully.

So, I request you to permit us to conduct this course. Kindly do the needful.

Course Coordinator

Mrs. Nagasree G

HOD

Dr. K Sujatha

HOD, Physics

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CITY ENGINEERING COLLEGE

Ref. No: CEC/BS/C1/1.2.1/ACY 2021-22/OR/01

Date: 07/12/2021

CIRCULAR

Sub: Conducting a Value-added Course on "Entrepreneurship and innovation".

This is to inform all the first-year students that our department is going to conduct a 5-day value added course on "Entrepreneurship and innovation" from Date 14-12-21 to 18-12-21. All the students have to participate compulsory for the same.

Course Coordinator

Mrs. Nagasree G

HOD

Dr. K Sujatha

HOD, Physics

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Department of Basic Science

Brochure

A value-added course on Entrepreneurship and innovation

CITY ENGINEERING COLLEGE
(Approved by AICTE New Delhi Affiliated by VTU, Belagavi)
Near Metro Station, Doddakallasandra
Bangalore – 560 062.

Value added Course on Entrepreneurship and Innovation

Organized by
"Department of Basic Science"
City Engineering College
Bangalore-560062

Date: 14-12-21 to 18-12-21
Venue : Seminar Hall

www.cityengineeringcollege.ac.in

Chief Patron

Dr. K.R. Paramahamsa
Chairman
AMC, City, Brooklyn Group of Institutions
Bangalore

Patrons

Dr H N Tippeswamy
Principal
City Engineering college
Bangalore

Convenor

Dr. Jyothi. P
HOD, Dept of Mathematics
City Engineering Colleg e

About College

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CITY ENGINEERING COLLEGE

About Basic Science	Expert Speaker for the Program	Entrepreneurship and Innovation
The Applied Science and Humanities Department in City Engineering College serves as a fundamental pillar, providing essential knowledge in fundamental scientific disciples such as mathematics, physis, and chemistry. This Department plays critical role in equipping engineering students with the core scientific principles and analytical skills necessary for heir specialized engineering studies. Faculty members in the Applied Science Department typically engage in both teaching and research, contributing to advancements in their fields and enhancing the overall academic environment. The department often offers courses that support and complement the various engineering programs, ensuring that students have a strong scientific grounding to solve complex engineering problems effectively.	**Dr. Mohammed Mathenulla Shariff** **Assistant Professor** **Islamiah Institute of Technology** **Bangalore-76** **Coordinators** **Mrs. Nagashree G** **Assistant .Professor** **Dept. of Physics, CEC** **Mrs. Sunitha N** **Assistant Professor** **Dept. of Chemistry, CEC**	 A value-added course on Entrepreneurship and innovation can equipping participants with the knowledge skills, and practical experience needed to excel in these dynamic fields. Through a blend of theoretical insights, hand-on activities, and real-world applications, participants will learn to identify opportunities, develop viable business models, and drive innovation in various contexts. Ensure that participants gain a through understanding of both the theoretical and practical aspects of entrepreneurship and innovation, preparing them to navigate and success in these exciting field.

Coordinator
Mrs. Nagasree G
Department of Physics

HOD
Dr. Sujatha K
Department of Physics

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Principal
Dr. T N Thippeswamy
CEC, Bangalore

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Department of Basic Science

Value Added course on Entrepreneurship and innovation

Academic Year: 2021-22 **Schedule** Venue: Seminar Hall

Date	Session 1 (9:15 – 11:15)	Session 2 (11:30 – 1:30)		Session 3 (2:00 – 4:00)
14-12-2021	Introduction to Entrepreneurship	The role of Entrepreneurship in economic development		Case Study- Successful Startups, group discussion
15-12-2021	Idea generation and evaluation	Brainstorming exercises		Methods for evaluating business opportunities
16-12-2021	Business Planning and Market Research	Components of Business Plan	Lunch Break (1:30 – 2:00)	Developing a Business Plan Outline
17-12-2021	Funding and Financial Management	Basics of Financial Management for Startups		Funding success Stories
18-12-2021	Innovation Management and Legal Considerations	Managing Innovation within an Organization		Building and Managing Effective Teams

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Course Content

Module 1: Introduction to Entrepreneurship, definitions and importance, Characteristics of Successful Entrepreneurs.

Module 2: Idea generation and evaluation, Mind mapping, Scamper Technique, Market Potential, Feasibility Analysis, SWOT analysis.

Module 3: Business Planning, Market Analysis, Sales strategies, Financial Projections, Developing a Business Model, Business Model Canvas.

Module 4: Market research and Customer insight, Tools and Techniques for Data Collection, Understanding Customer Needs, Cresting Customer Personas.

Module 5: Funding and Financial Management, Venture Capital, Financial Management Principles, Cash Flow Management, Financial Statements and Projections.

HOD
Dr. K Sujatha

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Department of Basic Science 2021-2022

Value Added course on Entrepreneurship and innovation

Resource Person Details

Dr. Mohammed Mathenulla Shariff

Assistant Professor

Islamiah Institute of Technology, Bangalore-76

Dr. Mohammed Mathenulla Shariff received his Bachelor of Engineering in Ghousia College of Engineering, Ramanagaram, Master of Engineering (Machine design) from UVCE, Bangalore and Ph.D from Presidency University, Bangalore. With over 16 years of teaching experience, research, and admiration, he is a seasoned professional in academia. His research interests include Polymer matrix, composites, design of Machine elements, and kinematics of Machines. With a strong focus on research excellence, he has also secured funding from KSCST for 01 project and has published 05 research papers, attended national and international conferences. He is a life member in international association of Engineers (IAENG). He has worked at SHINAS College of Technology as a faculty in Mechanical section, Engineering department and Sultanate of Oman for a period of three years. He has a patent in the field of Material Science and Manufacturing.

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Academic Year: 2021-2022

List of Student enrolled

Sl. No.	USN	Name		Sl. No.	USN	Name
1	1CE21EC001	AAKAANKSHA S KUMMUR		36	1CE21CS021	BHARATH S
2	1CE21EC002	AHMADI ALMAS KHANUM		37	1CE21CS022	BHARATH S
3	1CE21EC003	AKSHAYKUMAR		38	1CE21CS023	BHAVANI N
4	1CE21EC004	ATHIRA GUPTA R		39	1CE21CS024	CHANDR.ALEKHA S
5	1CE21EC005	CHETHAN D R		40	1CE21CS025	CHANDR.ASHEKAR M R
6	1CE21EC006	DARSHAN PAUL B		41	1CE21CS026	CHETHAN H S
7	1CE21EC007	GAGAN C		42	1CE21CS027	CHINMAYI L
8	1CE21EC008	GEETHA D R		43	1CE21CS028	DARSHAN
9	1CE21EC009	HARSHITH C GOWDA		44	1CE21CS029	DARSHAN K M
10	1CE21EC010	KENCHAPPA Y R		45	1CE21CS031	DARSHAN M Y
11	1CE21EC011	KRISHNAVENI L		46	1CE21CS032	DARSHAN S
12	1CE21EC012	NAGARAJ		47	1CE21CS033	DEEPAK K
13	1CE21EC013	NIVEDITHA P M		48	1CE21CS034	DHANUSH R
14	1CE21EC015	SINDHU S		49	1CE21CS035	DIKSHA P S
15	1CE21EC016	SOUNDARYA P GANAPA		50	1CE21CS036	G S BAHARATHI
16	1CE21EC017	VAMSHI KASHYAP S		51	1CE21CS037	GANESH DIWAKAR
17	1CE21CS001	A C VIMAL GOWDA		52	1CE21CS038	GANESH METI
18	1CE21CS002	ABHISHEK MG		53	1CE21CS039	GANGOTHRI V
19	1CE21CS003	ADITI R		54	1CE21CS040	GODHA M
20	1CE21CS004	ADITYA R RAGATE		55	1CE21CS041	HARISHA C
21	1CE21CS005	AJAY		56	1CE21CS042	HARSHA VARDHAN
22	1CE21CS006	AKSHITHA S		57	1CE21CS043	HARSHITHA G M
23	1CE21CS007	AMULYA V MURTHY		58	1CE21CS044	HARSHITHA JK
24	1CE21CS008	ANAND		59	1CE21CS045	HARSHITHA M
25	1CE21CS009	ANANYA YADAV		60	1CE21CS047	HARSHITHA N
26	1CE21CS010	ANJANEYA V		61	1CE21CS048	HARSHITHA S P
27	1CE21CS012	ANKUSH KUMAR		62	1CE21CS049	HASTAATH KHAN
28	1CE21CS013	ASHISH S D		63	1CE21CS050	HRITHIK M
29	1CE21CS014	ASHWINI C		64	1CE21CS051	HUSSAIN MUBARAK
30	1CE21CS015	ASHWINI S		65	1CE21CS052	IMDAD UL HAQ V I
31	1CE21CS016	AYESHA KALEEM		66	1CE21CS053	INCHARA S
32	1CE21CS017	BEERESH N		67	1CE21CS054	JAISHANKAR REDDY V
33	1CE21CS018	BHAGYAVANT		68	1CE21CS055	JAYANTH N
34	1CE21CS019	BHARATH KUMAR J		69	1CE21CS056	KAVYASHREE V
35	1CE21CS020	BHARATH REDDY G		70	1CE21CS057	KEERTANA SHENDR.E

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Sl. No.	USN	Name		Sl. No.	USN	Name
71	1CE21CS058	KEERTHANA S		109	1CE21CS096	PRIYANKA M
72	1CE21CS059	KEERTHANA U		110	1CE21CS097	PUNITH P
73	1CE21CS060	KIRAN M		111	1CE21CS098	SURYA R
74	1CE21CS061	KISHAN A		112	1CE21CS099	RAKESH M
75	1CE21CS062	KOMMINDALA PREM		113	1CE21CS100	RANJITHA S
76	1CE21CS063	KRUTHIK B R		114	1CE21CS101	RATNESH
77	1CE21CS064	M HARSHITHA		115	1CE21CS102	RESANYA K M
78	1CE21CS065	M NARESH		116	1CE21CS103	RICHEN SWOUGAMICA
79	1CE21CS066	SHRUTHI M P		117	1CE21CS104	RIMAH MANAL
80	1CE21CS067	MEGHANA M S		118	1CE21CS105	RUPINI C
81	1CE21CS068	MEGHANA N		119	1CE21CS106	RUPLA S JADAV
82	1CE21CS069	MIKIHISHA KARIBE		120	1CE21CS107	S ABHISHEK
83	1CE21CS070	MOHAMMAD JAFAR		121	1CE21CS108	S NAINA SHALLET
84	1CE21CS071	MOHAMMED ARKHAM		122	1CE21CS109	SACHIN B S
85	1CE21CS072	MOHAMMED DAWOOD		123	1CE21CS110	SAIF ALI BADAL
86	1CE21CS073	MOHAMMED FAIZ ALAM		124	1CE21CS111	SANDHYA M
87	1CE21CS074	MOHAMMED GOUSE		125	1CE21CS112	SANJANA A H
88	1CE21CS075	MOHAMMED JALALUDDIN		126	1CE21CS113	SANNIDHI N D
89	1CE21CS076	MOHAMMED SAAD		127	1CE21CS114	SATISH C
90	1CE21CS077	MOHAMMED SAFWAAN		128	1CE21CS115	SHAMBAVI S
91	1CE21CS078	MOHAMMED ZAHID		129	1CE21CS116	SHARATH SURGIMATH
92	1CE21CS079	MOHANA KRISHNA D		130	1CE21CS117	SHARON SARA
93	1CE21CS080	MONICA R		131	1CE21CS118	SHASHANK RAO L
94	1CE21CS081	MUSKAN SHARIFF		132	1CE21CS119	SHASHANK T S
95	1CE21CS082	NAVYA D		133	1CE21CS120	SHILPA S
96	1CE21CS083	NEHA Y		134	1CE21CS121	SHREE VISHNU
97	1CE21CS084	NISARGA M U		135	1CE21CS122	SHREELAKSHMI R
98	1CE21CS085	NITHIN P		136	1CE21CS123	SHUBHA M
99	1CE21CS086	NIVEDITHA R D		137	1CE21CS124	SHYAM KUMAR K
100	1CE21CS087	DANIEL JAYAKUMAR P		138	1CE21CS125	SINCHANA K P
101	1CE21CS088	P SHAMANTH		139	1CE21CS126	SINCHANA THULASIRAM
102	1CE21CS089	PAVAN M		140	1CE21CS127	SPANDANA M
103	1CE21CS090	POOJA M		141	1CE21CS128	SRINATHA V
104	1CE21CS091	PRAJNA DATTATRAYA		142	1CE21CS129	SRUJANA A M
105	1CE21CS092	PRATHAM S		143	1CE21CS130	SRUSHTI PRAKASH
106	1CE21CS093	PREETHI P N		144	1CE21CS131	SUHAS SHENOY
107	1CE21CS094	PREETHI V		145	1CE21CS132	SUMANTH J M
108	1CE21CS095	PRIYANKA J		146	1CE21CS133	SUNIL J S

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Sl. No.	USN	Name		Sl. No.	USN	Name
147	1CE21CS134	SUPRIYA M V		177	1CE21IS016	SAFRIN FATHIMA
148	1CE21CS135	SWATHI V		178	1CE21IS017	SAISHA C
149	1CE21CS136	T K THARUN		179	1CE21IS018	SATHISH V
150	1CE21CS137	TALLIN L N		180	1CE21IS019	SHIVAKUMAR N
151	1CE21CS138	TEJA J		181	1CE21IS020	SPOORTHI B
152	1CE21CS139	TEJASHREE N V		182	1CE21IS021	THANUJA S
153	1CE21CS140	THARUN H S		183	1CE21AI001	ABHIJNANA N
154	1CE21CS141	V MONICA		184	1CE21AI002	ABRAR ASHRAF
155	1CE21CS142	VAISHNAVI S SALIAN		185	1CE21AI003	AKSHATHA S R
156	1CE21CS144	VIDYA C		186	1CE21AI004	DARSHAN KUMAR P
157	1CE21CS145	VINOD KUMAR B C		187	1CE21AI005	DARSHAN T S
158	1CE21CS147	VISHWAJIT V		188	1CE21AI006	DARSHINI R
159	1CE21CS148	YATHISH R		189	1CE21AI007	DASETTY KRISHNA
160	1CE21CS149	YOGESH H V		190	1CE21AI008	DIVYA M
161	1CE21ME001	CHETHAN RAJEEV A T		191	1CE21AI009	GAGAN D N
162	1CE21IS001	ABHISHEK K		192	1CE21AI010	KAILASH RAO
163	1CE21IS002	AKASH KUMAR		193	1CE21AI011	NAMAN BAFNA
164	1CE21IS003	ANOOP S N		194	1CE21AI012	NISHCHIT Y V
165	1CE21IS004	DARSHAN M		195	1CE21AI013	RAIHAN SHARIFF P
166	1CE21IS005	DHANUSH N S		196	1CE21AI014	RAKSHITHA H S
167	1CE21IS006	GAGAN P		197	1CE21AI015	SHAIK ALIAF
168	1CE21IS007	GOUTHAM S		198	1CE21AI016	SHAMANTH M S
169	1CE21IS008	KANAKALAKSHMI		199	1CE21AI017	SYED ARHAN
170	1CE21IS009	KAVANA U		200	1CE21AI018	SYED INSAF MEHDI
171	1CE21IS010	MANI BHARATHI S		201	1CE21AI019	SYED MOHAMMED
172	1CE21IS011	NEERUKONDA		202	1CE21AI020	THARUN KUMAR R N
173	1CE21IS012	PUNITH KUMAR M S		203	1CE21AI021	VASISTA M
174	1CE21IS013	RADHIKA SUBHAS		204	1CE21AI022	S YASHASWI
175	1CE21IS014	RAKSHITHA R		205	1CE21AI023	YUVASHISH K
176	1CE21IS015	RAMAPURAM C				

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Value Added course on Entrepreneurship and innovation.

Attendance List

Sl. No.	USN	Name	14-12-21	15-12-21	16-12-21	17-12-21	18-12-21	Student Sign.
1	1CE21EC001	AAKAANKSHA S KUMMUR	P	P	P	P	P	Akum
2	1CE21EC002	AHMADI ALMAS KHANUM	P	P	P	P	P	Almas
3	1CE21EC003	AKSHAYKUMAR	P	P	P	P	A	AKUMAR
4	1CE21EC004	ATHIRA GUPTA R	A	P	P	P	P	Agupt
5	1CE21EC005	CHETHAN D R	P	A	P	P	P	Chandr
6	1CE21EC006	DARSHAN PAUL B	P	P	P	P	P	DarshPB
7	1CE21EC007	GAGAN C	P	P	P	P	P	Darshpa
8	1CE21EC008	GEETHA D R	P	P	P	P	A	Geetha
9	1CE21EC009	HARSHITH C GOWDA	P	P	A	P	P	Harshith
10	1CE21EC010	KENCHAPPA Y R	P	P	P	P	P	Kenchappa
11	1CE21EC011	KRISHNAVENI L	P	P	P	P	P	Krishnaveni
12	1CE21EC012	NAGARAJ	P	P	P	P	P	Nagaraj
13	1CE21EC013	NIVEDITHA P M			P	P	P	Niveditha
14	1CE21EC015	SINDHU S	P	P	P	P	P	Sindhu
15	1CE21EC016	SOUNDARYA P GANAPA	P	P	P	P	P	Soundarya P
16	1CE21EC017	VAMSHI KASHYAP S	P	A	P	P	P	Vamshi Kashyap
17	1CE21CS001	A C VIMAL GOWDA	P	P	P	P	P	Vimal Gowda
18	1CE21CS002	ABHISHEK MG	P	A	P	P		ABHISHEK
19	1CE21CS003	ADITI R	P	P	P	P	P	Aditi R
20	1CE21CS004	ADITYA R RAGATE		P	P	A	P	Aditya R
21	1CE21CS005	AJAY	P	P	P	P	P	Ajay
22	1CE21CS006	AKSHITHA S		P	P	P	A	Akshitha S
23	1CE21CS007	AMULYA V MURTHY	P	P	P	P	P	Amulya V
24	1CE21CS008	ANAND	P	P	P	P	P	Anand
25	1CE21CS009	ANANYA YADAV	P	A	P	P	P	Ananya Yadav
26	1CE21CS010	ANJANEYA V	P	P	P	P	P	Anjaneya
27	1CE21CS012	ANKUSH KUMAR	P	P	P	P	P	Ankush
28	1CE21CS013	ASHISH S D	P	P	P	P	P	Ashish SD
29	1CE21CS014	ASHWINI C	P	P	P	P	P	Ashwini
30	1CE21CS015	ASHWINI S	P	P	A	P	P	Ashwini
31	1CE21CS016	AYESHA KALEEM	A	P	P	P	P	Ayesha Kaleem
32	1CE21CS017	BEERESH N	A	P	P	P	A	Beeresh
33	1CE21CS018	BHAGYAVANT	P	A	P	A	P	Bhagyavant
34	1CE21CS019	BHARATH KUMAR J	P	P	P	P	P	Bharath Kumar
35	1CE21CS020	BHARATH REDDY G	P	P	P	P	P	Bharath Reddy

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36	1CE21CS021	BHARATH S	A	P	P	P	P	
37	1CE21CS022	BHARATH S	P	P	P	P	A	
38	1CE21CS023	BHAVANI N	P	P	P	P	P	BHAVANI
39	1CE21CS024	CHANDRALEKHA S	P	P	P	A	P	
40	1CE21CS025	CHANDRASHEKAR M R	P	P	P	P	P	
41	1CE21CS026	CHETHAN H S	A	P	P	P	P	
42	1CE21CS027	CHINMAYI L	P	P	P	P	P	
43	1CE21CS028	DARSHAN	P	P	A	P	P	
44	1CE21CS029	DARSHAN K M	P	P	P	P	P	DKM
45	1CE21CS031	DARSHAN M Y	P	P	P	P	A	DSI
46	1CE21CS032	DARSHAN S	P	P	P	P	P	
47	1CE21CS033	DEEPAK K	P	P	P	P	P	
48	1CE21CS034	DHANUSH R	A	P	P	P	P	
49	1CE21CS035	DIKSHA P S	P	P	P	A	P	
50	1CE21CS036	G S BAHARATHI	P	P	P	P	P	GSB
51	1CE21CS037	GANESH DIWAKAR	P	P	A	P	P	
52	1CE21CS038	GANESH METI	A	P	P	P	P	
53	1CE21CS039	GANGOTHRI V	P	P	P	P	P	GVD
54	1CE21CS040	GODHA M	P	P	P	P	P	
55	1CE21CS041	HARISHA C	P	P	P	P	P	
56	1CE21CS042	HARSHA VARDHAN	A	P	P	P	P	
57	1CE21CS043	HARSHITHA G M	P	P	P	P	P	
58	1CE21CS044	HARSHITHA JK	P	P	P	P	A	
59	1CE21CS045	HARSHITHA M	P	P	P	P	P	
60	1CE21CS047	HARSHITHA N	P	P	P	P	P	
61	1CE21CS048	HARSHITHA S P	P	P	P	P	P	
62	1CE21CS049	HASTAATH KHAN	P	P	A	P	P	
63	1CE21CS050	HRITHIK M	P	P	P	P	P	
64	1CE21CS051	HUSSAIN MUBARAK	A	P	P	P	P	
65	1CE21CS052	IMDAD UL HAQ V I	P	P	P	P	A	
66	1CE21CS053	INCHARA S	P	P	P	P	P	
67	1CE21CS054	JAISHANKAR REDDY V	P	A	P	P	P	
68	1CE21CS055	JAYANTH N	P	P	P	P	P	
69	1CE21CS056	KAVYASHREE V	P	P	P	P	P	

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Sl. No.	USN	Name	14-12-21	15-12-21	16-12-21	17-12-21	18-12-21	Student Sign.
70	1CE21CS057	KEERTANA SHENDRE	P	P	P	P	P	
71	1CE21CS058	KEERTHANA S	P	P	P	P	P	
72	1CE21CS059	KEERTHANA U	P	A	P	P	P	
73	1CE21CS060	KIRAN M	P	P	P	P	P	
74	1CE21CS061	KISHAN A	P	P	P	P	P	
75	1CE21CS062	KOMMINDALA PREM	P	P	P	P	P	
76	1CE21CS063	KRUTHIK B R	P	P	P	P	P	
77	1CE21CS064	M HARSHITHA	P	P	P	P	P	
78	1CE21CS065	M NARESH	A	P	P	P	P	
79	1CE21CS066	SHRUTHI M P	P	P	P	P	P	
80	1CE21CS067	MEGHANA M S	P	P	P	P	P	
81	1CE21CS068	MEGHANA N	P	P	P	P	P	
82	1CE21CS069	MIKIHISHA KARIBE	P	P	P	P	P	
83	1CE21CS070	MOHAMMAD JAFAR	P	P	P	P	P	
84	1CE21CS071	MOHAMMED ARKHAM	P	P	P	P	P	
85	1CE21CS072	MOHAMMED DAWOOD	P	P	A	P	P	
86	1CE21CS073	MOHAMMED FAIZ ALAM	P	P	P	P	P	
87	1CE21CS074	MOHAMMED GOUSE	P	P	P	P	P	
88	1CE21CS075	MOHAMMED JALALUDDIN	P	P	P	P	P	
89	1CE21CS076	MOHAMMED SAAD	P	P	P	P	P	
90	1CE21CS077	MOHAMMED SAFWAAN	P	P	P	P	P	
91	1CE21CS078	MOHAMMED ZAHID	P	P	P	P	P	
92	1CE21CS079	MOHANA KRISHNA D	P	A	P	P	P	
93	1CE21CS080	MONICA R	P	P	P	P	P	
94	1CE21CS081	MUSKAN SHARIFF	P	P	P	P	P	
95	1CE21CS082	NAVYA D	P	P	P	P	P	
96	1CE21CS083	NEHA Y	P	P	P	P	P	
97	1CE21CS084	NISARGA M U	P	P	P	P	P	
98	1CE21CS085	NITHIN P	P	P	P	P	P	
99	1CE21CS086	NIVEDITHA R D	P	P	P	P	P	
100	1CE21CS087	DANIEL JAYAKUMAR P	P	P	P	P	P	
101	1CE21CS088	P SHAMANTH	P	P	P	A	P	
102	1CE21CS089	PAVAN M	P	P	P	P	P	
103	1CE21CS090	POOJA M	P	P	P	P	P	
104	1CE21CS091	PRAJNA DATTATRAYA	P	P	P	P	P	
105	1CE21CS092	PRATHAM S	P	P	A	P	P	

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Sl. No.	USN	Name	14-12-21	15-12-21	16-12-21	17-12-21	18-12-21	Student Sign.
106	1CE21CS093	PREETHI P N	P	P	P	P	P	
107	1CE21CS094	PREETHI V	P	P	P	P	P	
108	1CE21CS095	PRIYANKA J	P	P	P	P	P	
109	1CE21CS096	PRIYANKA M	P	P	P	P	P	
110	1CE21CS097	PUNITH P	P	P	P	P	P	
111	1CE21CS098	SURYA R	P	P	P	P	P	
112	1CE21CS099	RAKESH M	P	P	P	P	P	
113	1CE21CS100	RANJITHA S	P	P	P	P	P	
114	1CE21CS101	RATNESH	P	P	P	P	P	
115	1CE21CS102	RESANYA K M	P	P	P	P	P	
116	1CE21CS103	RICHEN SWOUGAMICA	P	P	P	P	P	
117	1CE21CS104	RIMAH MANAL	P	P	P	P	P	
118	1CE21CS105	RUPINI C	P	P	P	P	A	
119	1CE21CS106	RUPLA S JADAV	P	P	P	P	P	
120	1CE21CS107	S ABHISHEK	P	P	P	P	P	
121	1CE21CS108	S NAINA SHALLET	P	P	P	P	P	
122	1CE21CS109	SACHIN B S	P	P	P	P	P	
123	1CE21CS110	SAIF ALI BADAL	P	P	P	P	P	
124	1CE21CS111	SANDHYA M	P	P	P	P	P	
125	1CE21CS112	SANJANA A H	P	P	P	P	P	
126	1CE21CS113	SANNIDHI N D	P	P	P	P	P	
127	1CE21CS114	SATISH C	P	P	P	P	P	
128	1CE21CS115	SHAMBAVI S	P	P	P	P	P	
129	1CE21CS116	SHARATH SURGIMATH	P	P	P	P	P	
130	1CE21CS117	SHARON SARA	P	P	P	P	P	
131	1CE21CS118	SHASHANK RAO L	P	P	P	P	P	
132	1CE21CS119	SHASHANK T S	P	P	P	P	P	
133	1CE21CS120	SHILPA S	P	P	P	P	P	
134	1CE21CS121	SHREE VISHNU	P	P	P	P	P	
135	1CE21CS122	SHREELAKSHMI R	P	P	A	P	P	
136	1CE21CS123	SHUBHA M	P	P	P	P	P	
137	1CE21CS124	SHYAM KUMAR K	P	P	P	P	P	
138	1CE21CS125	SINCHANA K P	P	P	P	P	P	
139	1CE21CS126	SINCHANA THULASIRAM	P	P	P	P	P	
140	1CE21CS127	SPANDANA M	P	P	P	P	P	

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141	1CE21CS128	SRINATHA V	P	P	P	P	P	
142	1CE21CS129	SRUJANA A M	P	P	P	P	P	
143	1CE21CS130	SRUSHTI PRAKASH	P	P	P	A	P	
144	1CE21CS131	SUHAS SHENOY	P	P	P	P	P	
145	1CE21CS132	SUMANTH J M	P	A	P	P	P	
146	1CE21CS133	SUNIL J S	P	P	P	P	P	
147	1CE21CS134	SUPRIYA M V	P	P	P	P	P	
148	1CE21CS135	SWATHI V	P	P	P	P	P	
149	1CE21CS136	T K THARUN	P	P	P	A	P	
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154	1CE21CS141	V MONICA	P	P	P	P	P	
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156	1CE21CS144	VIDYA C	P	P	P	P	P	
157	1CE21CS145	VINOD KUMAR B C	P	P	A	P	P	
158	1CE21CS147	VISHWAJIT V	P	P	P	P	P	
159	1CE21CS148	YATHISH R	P	P	P	P	P	
160	1CE21CS149	YOGESH H V	P	P	A	P	P	
161	1CE21ME001	CHETHAN RAJEEV A T	P	P	P	P	P	
162	1CE21IS001	ABHISHEK K	P	P	A	P	P	
163	1CE21IS002	AKASH KUMAR	P	P	P	P	P	
164	1CE21IS003	ANOOP S N	A	P	P	P	P	
165	1CE21IS004	DARSHAN M	P	P	P	P	P	
166	1CE21IS005	DHANUSH N S	A	P	P	P	P	
167	1CE21IS006	GAGAN P	P	P	P	P	P	
168	1CE21IS007	GOUTHAM S	P	A	P	P	P	
169	1CE21IS008	KANAKALAKSHMI	P	P	P	P	P	
170	1CE21IS009	KAVANA U	P	P	P	P	P	
171	1CE21IS010	MANI BHARATHI S	P	P	A	P	P	
172	1CE21IS011	NEERUKONDA	P	P	P	P	P	
173	1CE21IS012	PUNITH KUMAR M S	P	P	P	P	P	
174	1CE21IS013	RADHIKA SUBHAS	P	P	A	P	P	
175	1CE21IS014	RAKSHITHA R	P	A	P	P	P	
176	1CE21IS015	RAMAPURAM C	P	P	P	P	P	
177	1CE21IS016	SAFRIN FATHIMA	P	P	P	P	P	

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178	1CE21IS017	SAISHA C	P	P	P	P	P	
179	1CE21IS018	SATHISH V	P	P	P	P	P	
180	1CE21IS019	SHIVAKUMAR N	P	P	P	P	P	
181	1CE21IS020	SPOORTHI B	P	P	P	P	P	
182	1CE21IS021	THANUJA S	P	A	P	P	P	
183	1CE21AI001	ABHIJNANA N	P	P	P	P	P	
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185	1CE21AI003	AKSHATHA S R	P	P	P	P	P	
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189	1CE21AI007	DASETTY KRISHNA	P	P	P	P	P	
190	1CE21AI008	DIVYA M	P	P	P	P	P	
191	1CE21AI009	GAGAN D N	P	P	P	P	P	
192	1CE21AI010	KAILASH RAO	P	P	P	P	P	
193	1CE21AI011	NAMAN BAFNA	P	P	P	P	P	
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201	1CE21AI019	SYED MOHAMMED	P	P	P	P		
202	1CE21AI020	THARUN KUMAR R N	P	P	P	P	P	
203	1CE21AI021	VASISTA M	P	P	P	P	P	
204	1CE21AI022	S YASHASWI	P	P	P	P	P	
205	1CE21AI023	YUVASHISH K	P	P	P	P	P	

Course Coordinator
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Department of Physics

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Principal
Dr. H N Tippeswamy
CEC, Bangalore

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Department of Basic Science 2021 -22

Value added course On Entrepreneurship and innovation Assessment

Assessment Questions

1. What is a key characteristic of successful entrepreneurs?

a) Risk aversion

b) Persistence

c) Lack of vision

d) Inflexibility

2. Entrepreneurship primarily contributes to economic development by:

a) Increasing unemployment

b) Reducing competition

c) Creating new jobs and innovations

d) Importing foreign goods

3. Which of the following is NOT a typical characteristic of an entrepreneur?

a) Creativity

b) Risk-taking

c) Dependence on others

d) Self-motivation

4. Which technique is commonly used for generating innovative ideas?

a) Benchmarking

b) Brainstorming

c) SWOT Analysis

d) Budgeting

5. SWOT analysis helps in evaluating a business opportunity by analyzing:

a) Sales and marketing

b) Strengths, Weaknesses, Opportunities, and Threats

c) Supply chain

d) Social media presence

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6. What does the "S" in the SCAMPER technique stand for?

a) Simplify

b) Substitute

c) Systemize

d) Segment

7. Which section of a business plan outlines the company's goals and objectives?

a) Executive Summary

b) Market Analysis

c) Financial Projections

d) Service or Product Line

8. The Business Model Canvas is used to:

a) Dr.aw a company's logo

b) Visualize and describe a company's business model

c) Design a website

d) Track inventory

9. Which part of a business plan details the competitive landscape?

a) Financial Projections

b) Market Analysis

c) Company Description

d) Marketing and Sales Strategies

10. Primary research involves:

a) Analysing existing data

b) Collecting new data directly from sources

c) Reviewing competitors' strategies

d) Using secondary sources

11.Customer personas are used to:

a) Track financial performance

b) Segment customers based on their characteristics and behaviour

c) Hire new employees

d) Develop product prototypes

12. Secondary research refers to:

a) First-hand data collection

b) Data collected by someone else

c) Interviewing customers

d) Observational studies

13. Which is a common funding option for startups?

a) Government bonds

b) Angel investors

c) Personal savings

d) Stock market

14. Cash flow management primarily involves:

a) Increasing production

b**) Managing the inflow and outflow of cash**

c) Designing marketing campaigns

d) Hiring employees

15. Crowdfunding is:

a) Raising small amounts of money from a large number of people

b) Obtaining a loan from a bank

c) Getting investment from venture capitalists

d) Using personal funds to start a business

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16. Disruptive innovation refers to:

a) Minor improvements to existing products

b) Innovations that create new markets and disrupt existing ones

c) Copying competitors' products

d) Innovations that fail to attract customers

17. An innovative culture in an organization is characterized by:

a) Strict hierarchical structures

b) Encouraging experimentation and risk-taking

c) Discouraging new ideas

d) Maintaining the status quo

18. Incremental innovation involves:

a) Radical changes to products

b) Small, continuous improvements

c) Launching entirely new products

d) Eliminating existing products

19. Intellectual property rights protect:

a) Physical assets

b) Innovations and creative works

c) Employee salaries

d) Office supplies

20. Which is an example of corporate social responsibility?

a) Maximizing profits at any cost

b) Ignoring environmental regulations

c) Engaging in fair trade practices

d) Cutting employee benefits

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21. A legal structure where owners are not personally liable for the company's debts is:
a) Sole proprietorship
b) Partnership
c) Corporation
d) Cooperative

22. Effective leaders often exhibit:
a) Authoritarian control
b) Vision and inspiration
c) Inflexibility
d) Indecisiveness

23. Team dynamics refer to:
a) The financial stability of a company
b) The interactions and relationships within a team
c) The physical location of the team
d) The marketing strategy of a team

24. Which is a key aspect of performance management in teams?
a) Ignoring conflicts
b) Setting clear goals and expectations
c) Avoiding feedback
d) Reducing team meetings

25. The 4Ps in the marketing mix include:
a) Product, Price, Place, Promotion
b) People, Process, Physical evidence, Profit
c) Plan, Process, Product, Profit
d) Price, People, Plan, Place

Course Coordinator	HOD	Principal
Mrs. Nagasree G	Dr. Sujatha K	Dr.. H N Thippeswamy
Department of Physics	Department of Physics	CEC, Bangalore

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Department of Basic Science 2021 -22

Value added course On Entrepreneurship and innovation
Assessment Result

Sl. No.	USN	Name	Marks	Sl. No.	USN	Name	Marks
1	1CE21EC001	AAKAANKSHA S KUMMUR	18	36	1CE21CS021	BHARATH S	16
2	1CE21EC002	AHMADI ALMAS KHANUM	19	37	1CE21CS022	BHARATH S	12
3	1CE21EC003	AKSHAYKUMAR	15	38	1CE21CS023	BHAVANI N	18
4	1CE21EC004	ATHIRA GUPTA R	16	39	1CE21CS024	CHANDR.ALEKHA S	19
5	1CE21EC005	CHETHAN D R	18	40	1CE21CS025	CHANDR.ASHEKAR M R	20
6	1CE21EC006	DARSHAN PAUL B	20	41	1CE21CS026	CHETHAN H S	16
7	1CE21EC007	GAGAN C	17	42	1CE21CS027	CHINMAYI L	15
8	1CE21EC008	GEETHA D R	16	43	1CE21CS028	DARSHAN	16
9	1CE21EC009	HARSHITH C GOWDA	12	44	1CE21CS029	DARSHAN K M	15
10	1CE21EC010	KENCHAPPA Y R	18	45	1CE21CS031	DARSHAN M Y	17
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13	1CE21EC013	NIVEDITHA P M	16	48	1CE21CS034	DHANUSH R	18
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15	1CE21EC016	SOUNDARYA P GANAPA	20	50	1CE21CS036	G S BAHARATHI	16
16	1CE21EC017	VAMSHI KASHYAP S	16	51	1CE21CS037	GANESH DIWAKAR	17
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18	1CE21CS002	ABHISHEK MG	16	53	1CE21CS039	GANGOTHRI V	19
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20	1CE21CS004	ADITYA R RAGATE	20	55	1CE21CS041	HARISHA C	16
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35	1CE21CS020	BHARATH REDDY G	12	70	1CE21CS057	KEERTANA SHENDR.E	18

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74	1CE21CS061	KISHAN A	17	112	1CE21CS099	RAKESH M	16
75	1CE21CS062	KOMMINDALA PREM	16	113	1CE21CS100	RANJITHA S	15
76	1CE21CS063	KRUTHIK B R	12	114	1CE21CS101	RATNESH	17
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78	1CE21CS065	M NARESH	19	116	1CE21CS103	RICHEN SWOUGAMICA	20
79	1CE21CS066	SHRUTHI M P	20	117	1CE21CS104	RIMAH MANAL	18
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84	1CE21CS071	MOHAMMED ARKHAM	15	122	1CE21CS109	SACHIN B S	19
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86	1CE21CS073	MOHAMMED FAIZ ALAM	18	124	1CE21CS111	SANDHYA M	16
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93	1CE21CS080	MONICA R	20	131	1CE21CS118	SHASHANK RAO L	18
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151	1CE21CS138	TEJA J	16	181	1CE21IS020	SPOORTHI B	15
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153	1CE21CS140	THARUN H S	18	183	1CE21AI001	ABHIJNANA N	16
154	1CE21CS141	V MONICA	19	184	1CE21AI002	ABRAR ASHRAF	15
155	1CE21CS142	VAISHNAVI S SALIAN	20	185	1CE21AI003	AKSHATHA S R	16
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158	1CE21CS147	VISHWAJIT V	20	188	1CE21AI006	DARSHINI R	19
159	1CE21CS148	YATHISH R	19	189	1CE21AI007	DASETTY KRISHNA	20
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163	1CE21IS002	AKASH KUMAR	20	193	1CE21AI011	NAMAN BAFNA	17
164	1CE21IS003	ANOOP S N	17	194	1CE21AI012	NISHCHIT Y V	20
165	1CE21IS004	DARSHAN M	16	195	1CE21AI013	RAIHAN SHARIFF P	19
166	1CE21IS005	DHANUSH N S	12	196	1CE21AI014	RAKSHITHA H S	20
167	1CE21IS006	GAGAN P	18	197	1CE21AI015	SHAIK ALIAF	16
168	1CE21IS007	GOUTHAM S	19	198	1CE21AI016	SHAMANTH M S	15
169	1CE21IS008	KANAKALAKSHMI	20	199	1CE21AI017	SYED ARHAN	16
170	1CE21IS009	KAVANA U	16	200	1CE21AI018	SYED INSAF MEHDI	15
171	1CE21IS010	MANI BHARATHI	18	201	1CE21AI019	SYED MOHAMMED	17
172	1CE21IS011	NEERUKONDA	20	202	1CE21AI020	THARUN KUMAR R N	19
173	1CE21IS012	PUNITH KUMAR M	19	203	1CE21AI021	VASISTA M	20
174	1CE21IS013	RADHIKA SUBHAS	15	204	1CE21AI022	S YASHASWI	18
175	1CE21IS014	RAKSHITHA R	16	205	1CE21AI023	YUVASHISH K	19
176	1CE21IS015	RAMAPURAM C	15				

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Department of Basic Science 2021-22

Value added course On Entrepreneurship and innovation
Assessment

NAME: SINDHU
USN: 1CE21EC015

17/25

1. What is a key characteristic of successful entrepreneurs?

a) Risk aversion

(b) Persistence

c) Lack of vision

d) Inflexibility

2. Entrepreneurship primarily contributes to economic development by:

a) Increasing unemployment

b) Reducing competition

(c) Creating new jobs and innovations

d) Importing foreign goods

3. Which of the following is NOT a typical characteristic of an entrepreneur?

a) Creativity

b) Risk-taking

(c) Dependence on others

d) Self-motivation

4. Which technique is commonly used for generating innovative ideas?

a) Benchmarking

(b) Brainstorming

c) SWOT Analysis

d) Budgeting

5. SWOT analysis helps in evaluating a business opportunity by analysing:

a) Sales and marketing

(b) Strengths, Weaknesses, Opportunities, and Threats

c) Supply chain

d) Social media presence

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6. What does the "S" in the SCAMPER technique stand for?

a) Simplify

b) Substitute

(c) Systemize

d) Segment

7. Which section of a business plan outlines the company's goals and objectives?

a) Executive Summary

(b) Market Analysis

c) Financial Projections

d) Service or Product Line

8. The Business Model Canvas is used to:

a) Draw a company's logo

(b) Visualize and describe a company's business model

c) Design a website

d) Track inventory

9. Which part of a business plan details the competitive landscape?

(a) Financial Projections

b) Market Analysis

c) Company Description

d) Marketing and Sales Strategies

10. Primary research involves:

(a) Analysing existing data

b) Collecting new data directly from sources

c) Reviewing competitors' strategies

d) Using secondary sources

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11.Customer personas are used to:

a) Track financial performance

b) Segment customers based on their characteristics and behaviour

(c) Hire new employees

d) Develop product prototypes

12. Secondary research refers to:

a) First-hand data collection

(b) Data collected by someone else

c) Interviewing customers

d) Observational studies

13. Which is a common funding option for startups?

a) Government bonds

(b) Angel investors

c) Personal savings

d) Stock market

14. Cash flow management primarily involves:

a) Increasing production

b) Managing the inflow and outflow of cash

(c) Designing marketing campaigns

d) Hiring employees

15. Crowdfunding is:

(a) Raising small amounts of money from a large number of people

b) Obtaining a loan from a bank

c) Getting investment from venture capitalists

d) Using personal funds to start a business

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16. Disruptive innovation refers to:

a) Minor improvements to existing products

(b) Innovations that create new markets and disrupt existing ones

c) Copying competitors' products

d) Innovations that fail to attract customers

17. An innovative culture in an organization is characterized by:

a) Strict hierarchical structures

(b) Encouraging experimentation and risk-taking

c) Discouraging new ideas

d) Maintaining the status quo

18. Incremental innovation involves:

(a) Radical changes to products

b) Small, continuous improvements

c) Launching entirely new products

d) Eliminating existing products

19. Intellectual property rights protect:

a) Physical assets

(b) Innovations and creative works

c) Employee salaries

d) Office supplies

20. Which is an example of corporate social responsibility?

a) Maximizing profits at any cost

b) Ignoring environmental regulations

(c) Engaging in fair trade practices

d) Cutting employee benefits

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21. A legal structure where owners are not personally liable for the company's debts is:

a) Sole proprietorship

b) Partnership

(c) Corporation

d) Cooperative

22. Effective leaders often exhibit:

a) Authoritarian control

(b) Vision and inspiration

c) Inflexibility

d) Indecisiveness

23. Team dynamics refer to:

(a) The financial stability of a company

b) The interactions and relationships within a team

c) The physical location of the team

d) The marketing strategy of a team

24. Which is a key aspect of performance management in teams?

a) Ignoring conflicts

(b) Setting clear goals and expectations

c) Avoiding feedback

d) Reducing team meetings

25. The 4Ps in the marketing mix include:

(a) Product, Price, Place, Promotion

b) People, Process, Physical evidence, Profit

c) Plan, Process, Product, Profit

d) Price, People, Plan, Plac

Course Coordinator	HOD	Principal
Mrs. Nagasree G	Dr. Sujatha K	Dr. H N Thippeswamy
Department of Physics	Department of Physics	CEC, Bangalore

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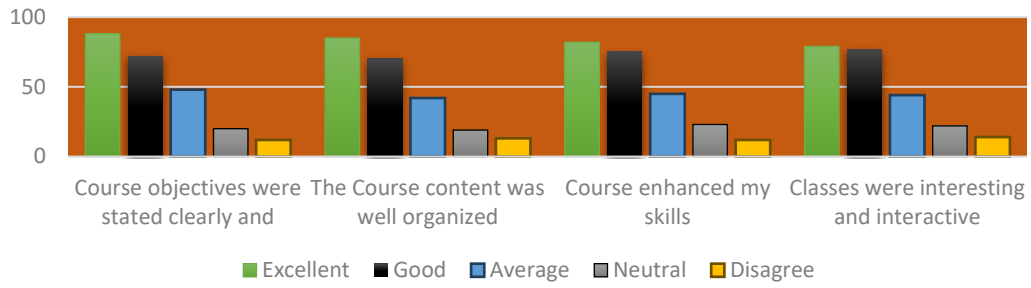
Department of Basic Science

Student Feedback Analysis

Sample Feedback

Name of the Participant	Course objectives were stated clearly and met	The Course content was well organized	Course enhanced my skills	Classes were interesting and interactive
DARSHAN PAUL B	Neutral	Agree	Agree	Agree
GAGAN C	Neutral	Neutral	Neutral	Neutral
GEETHA D R	Agree	Disagree	Agree	Agree
DARSHAN S	Agree	Agree	Agree	Neutral
DEEPAK K	Agree	Agree	Neutral	Neutral
KEERTHANA U	Neutral	Neutral	Neutral	Disagree
KIRAN M	Agree	Agree	Neutral	Agree

Fig.1 Graph



Feedback Responses -180

Feedback Summary –

- Entrepreneurship stimulates economic activity by creating new businesses, which in turn generate income, increase GDP, and enhance overall economic health.
- New ventures often lead to the creation of new job opportunities, reducing unemployment rates and providing livelihoods for many people.
- Innovation drives businesses to improve their products, services, and processes, leading to increased competitiveness in local and global markets.
- The introduction of innovative products and services can improve the quality of life by making goods and services more accessible, affordable, and efficient.

Course Coordinator	HOD	Principal
Mrs. Nagasree G	Dr. K Sujatha	Dr. H N Thippeswamy

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Department of Basic Science

Value Added course on Entrepreneurship and innovation

Course Objectives

The course objectives are:

- Equip students with the knowledge and skills to start and grow businesses that contribute to the economy, creating wealth and improving the overall economic landscape.
- Train future entrepreneurs to build businesses that generate employment, addressing unemployment and providing stable career opportunities.
- Encourage innovative thinking to solve pressing societal challenges, such as environmental issues, healthcare, and education, through entrepreneurial ventures.
- Teach students how to develop competitive business strategies that enhance market efficiency and provide better choices for consumers.
- Promote the use of cutting-edge technology and innovative practices to boost productivity and drive technological progress within industries.

Course Outcomes

The students will be able to:

- Entrepreneurship stimulates economic activity by creating new businesses, which in turn generate income, increase GDP, and enhance overall economic health.
- New ventures often lead to the creation of new job opportunities, reducing unemployment rates and providing livelihoods for many people.
- Innovation drives businesses to improve their products, services, and processes, leading to increased competitiveness in local and global markets.
- The introduction of innovative products and services can improve the quality of life by making goods and services more accessible, affordable, and efficient.
- Entrepreneurs often identify and address specific community needs and problems through innovative solutions, leading to social and economic improvements in local areas.

Course Coordinator	HOD	Principal
Mrs. Nagasree G	Dr. K Sujatha	Dr. H N Thippeswamy

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Department of Basic Science

Report on Value Added course "Entrepreneurship and innovation"

A five-day Value-Added Course on **Entrepreneurship and innovation** was organised by the Department of Basic Science from 14th to 18th Dec 2021 for First year students in the seminar hall by **Dr. Mohammed Mathenulla Shariff.** The schedule for a five-day Value-Added Course on Entrepreneurship and innovation for Personal & Professional Productivity covered key topics.

Day 1:

Morning Session:

The event began with a formal inaugural function. Principal CEC and HOD's of Basic Science were present during the inauguration. The program began by seeking the blessings of Almighty with invocation and lighting of lamp. Principal advised the students to utilize the benefits of the course completely. Mrs. Sunitha N Welcomed the resource person and gave a course overview. Later the session was handed over to the speaker.

The first day introduces students to the fundamentals of entrepreneurship and its significant role in economic growth. Through lectures and discussions, students explore how new businesses stimulate economic activity and create wealth. The day includes brainstorming sessions for business ideas and insights from a local entrepreneur, providing a foundational understanding of entrepreneurship's impact on the economy.

Day 2:

On the second day, the focus shifts to how entrepreneurship generates job opportunities and drives market competition. Students learn about the employment impact of new ventures and the strategies businesses use to remain competitive. Activities include developing business models and a panel discussion with industry experts, concluding with a guest speaker discussing the importance of HR in startups.

Day 3:

Day three emphasizes the role of innovation in addressing societal challenges. Students delve into various types of innovation and their significance in solving pressing issues. Through group activities and design thinking workshops, they identify societal needs and propose innovative solutions. The day features a social entrepreneur guest speaker who shares experiences of creating impactful solutions.

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Day 4:
The fourth day explores how technological advancements enhance productivity and quality of life. Students learn about the integration of technology in businesses and analyze case studies of tech-driven startups. Workshops provide hands-on experience in applying technology to business ideas, complemented by insights from a tech entrepreneur on the opportunities and challenges in tech entrepreneurship.

Day 5:

The final day focuses on fostering a culture of risk-taking, resilience, and continuous improvement. Students examine risk management, analyze failures to learn from common pitfalls, and discuss strategies for building resilience. Activities include applying continuous improvement techniques to business ideas, with a serial entrepreneur sharing experiences of overcoming challenges and achieving success. The day wraps up with a recap of the week's key learnings.

Course Coordinator	HOD	Principal
Mrs. Nagasree G	Dr. K Sujatha	Dr. H N Thippeswamy
Department of Physics	Department of Physics	CEC, Bamglore

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CERTIFICATE OF PARTICIPATION

This certificate is proudly presented to

AKSHAY KUMAR

1CE21EC003

From the Basic Science Department for participation in the Course on "Entrepreneurship and Innovation" from 14th to 18th Dec 2021

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Department of Physics

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S. YASHASWI

1CE21AI022

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Doddakallasandra, Bangalore-560061

Department of Civil Engineering

Academic Year 2021 – 2022

Course

On

Advanced Survey Instruments

Date 13-12-21 to 17-12-21

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CITY ENGINEERING COLLEGE

CITY ENGINEERING COLLEGE
Doddakallasandra, Bangalore-560061

Date: 07-12-2021

To

The principal
City Engineering College
Bangalore

Sub: Regarding Permission to conduct Course on "Advanced Survey Instruments".

Respected Sir,

We would like to conduct a Course on "Advanced Survey Instruments" for Civil Engineering students from Date 13-12-21 to 17-12-21. It helps the student to have an understanding about Advanced Survey Instruments.

So, I request you to permit us to conduct this course. Kindly do the needful.

Yours Sincerely

Dr. Thippeswamy H N
HOD
Department of Civil Engineering

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CITY ENGINEERING COLLEGE
Doddakallasandra, Bangalore-560061

Ref. No: CEC/CED/C1/1.2.1/ACY2021-22 /OR/01

Date: 08/12/2021

CIRCULAR

Sub: Conducting a Course.

This is to inform all the students that our department is going to conduct a 5-day Course on "Advanced Survey Instruments" from Date 13-12-21 to 17-12-21. All students contact the respective coordinator to participate in this Course.

Dr. Thippeswamy H N
HOD
Department of Civil Engineering

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CITY ENGINEERING COLLEGE

Doddakallasandra, Bangalore-560061

Department of Civil Engineering

Course on Advanced Survey Instruments

Brochure

CITY ENGINEERING COLLEGE
(Approved by AICTE New Delhi & Affiliated by VTU, Belagavi)
Near Metro Station, Doddakallasandra
Bangalore – 560 062.

Value Added Course on Advanced Survey Instruments

Date: 12-12-21 to 17-12-21
Venue : Seminar Hall

Organized by
Department of Civil Engineering
City Engineering College
Bangalore-560062

www.cityengineeringcollege.ac.in

Advisory Committee

Chief Patron

Dr. K R Paramahamsa
MBA, L.L.B., Ph.D. (USA), D.Litt,
Honorable Chairman
AMC – City Group of Institutions

Patrons
Smt. Geetha Paramahamsa
Honorable Vice Chairperson,
AMC – City Group of Institutions

Ms. Monica Kalluri
Honorable Vice – President
AMC – City Group of Institutions.

Mr. Rahul Kalluri
Honorable Executive – President
AMC – City Group of Institutions.

Dr. Thippeswamy H N
Principal, City Engineering college, Bangalore.
Dr. Jyothi. P
Vice Principal, HOD, Dept of Mathematics, CEC

Convenor
Dr. Thippeswamy H N
Professor and Head, Civil Engineering Department, CEC

Coordinator
Mr. Vinay Kumar S N
Assistant Professor, Dept. of Civil Engineering, CEC

About College

City Engineering College, Bangalore affiliated to Visvesvaraya Technological University (VTU) is centrally located in Bangalore. The College has expanded over the last 19 years with sophisticated infrastructure as a part of the Institution's commitment to provide higher quality education in the area of Engineering. The highly facilitated landmark building – provides a perfect ambience for creativity and learning. City Engineering College is known for its academic excellence, friendly welcoming atmosphere and community spirit. Over large number of full time students study here in a wide range of programs. It is a center of talented, experienced teachers who inspire and energize the students to achieve the best.

About the Civil Engineering Department

The Department of Civil Engineering was started in the year 2011 with an intake of 60 and further increased to 120 in the year 2014 to impart Quality Technical Education to the aspirants of Civil Engineering. The Department has well stocked library, state of the art Class rooms and Laboratories. The Department has formed Club – RACE - Royal Association of Civil Engineers. The aim of the club is to bridge the gap between Academics and the Industry. RACE in association with the Experts in the Field/ Industry has arranged several programs, workshops, Industrial Visits for the benefit of faculty and the students and to keep them abreast with the latest knowledge and industry challenges.

Expert Speakers for the Program

Mr. Yashwanth
Lawrence & Mayo
No.76/1, 2nd Floor AMR Complex,
Mission Rd,Sudhama Nagar,
Bengaluru

About Plumbing

A Advanced Survey Instruments, value-added course is designed to helps the student to have an understanding about Advanced Survey Instruments.

This course aims to make students aware with different advance surveying methodologies applied to carry out large scale survey works as modern instruments have largely changed the approach to survey works with the principles being same, to provide knowledge of Total Station & advanced surveying instruments, develop skills in using Total Station & advanced surveying instruments and analyse data, develop ability to transform basic concept of surveying to field practice.

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Doddakallasandra, Bangalore-560061

Department of Civil Engineering

Course on Advanced Survey Instruments

Schedule

Academic Year: 2021-22 Venue: Seminar Hall

Date	Session 1 (9:15 – 11:15)	Session 2 (11:30 – 1:30)		Session 3 (2:00 – 4:00)
07-09-2020	Introduction to Angle and Distance Measurements	Measure Remote Distance and Elevation		Station Establishment and Orientation
08-09-2020	Introduction to Co-ordinate systems	Field Task for understanding various Coordinate systems		Field Task for understanding various Coordinate systems
09-09-2020	Introduction to total station and basic features	Setting of total station & Practice for station setup	Lunch Break (1:30 – 2:00)	Creation of new job, points data collection, instrument shifting techniques
10-09-2020	Field survey	Field survey		Field survey
11-09-20	Exporting field data to computer & Hands on session for processing Field Data in AutoCad	Exporting field data to computer & Hands on session for processing Field Data in AutoCad		Stakeout task & Practice session

Mr. Vinay Kumar S N
Course Coordinator
Assistant Professor
Department of Civil Engineering

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Dr. Thippeswamy H N
HOD
Department of Civil Engineering

CITY ENGINEERING COLLEGE
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Department of Civil Engineering

Course on Advanced Survey Instruments

Course Content

Module 1: Introduction to Angle and Distance Measurements, Measure Remote Distance and Elevation.

Module 2: Station Establishment and Orientation, Introduction to Co-ordinate systems.

Module 3: Introduction to total station and basic features, Setting of total station & Practice for station setup.

Module 4: Creation of new job, points data collection, instrument shifting techniques, Field survey.

Module 5: Exporting field data to computer & Hands on session for processing Field Data in AutoCad, Stakeout task & Practice session.

Mr. Vinay Kumar S N
Course Coordinator
Assistant Professor
Department of Civil Engineering

Dr. Thippeswamy H N
HOD
Department of Civil Engineering

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Doddakallasandra, Bangalore-560061

Department of Civil Engineering

Course on Advanced Survey Instruments

Resource Person Profile

Mr. Yashwanth

Lawrence & Mayo
No.76/1, 2nd Floor AMR Complex, Mission Rd, Sudhama Nagar, Bengaluru

- Mr. Yashwanth, trainer from Lawrence & Mayo is the resource person for this event.
- LYNX-Lawrence & Mayo is the exclusive sales & service provider for Pentax Surveying instruments in India.
- Lawrence & Mayo (India) Pvt Ltd was incorporated in 1877. The Division is at the forefront in providing state-of-the-art Scientific and Engineering instruments and has tie-ups with international companies for their wide range of instruments.
- They have entire range of sophisticated Surveying Instrument viz Electronic Total Stations with 1", 2", 3" and 5" accuracy, DGPS, Digital Theodolites, Automatic Levels, Digital Level, Scanners, Laser Levels from Pentax & Software from Micro Survey & Effigies.

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Doddakallasandra, Bangalore-560061

Department of Civil Engineering

Enrolled Student List

Sl. No.	USN	Name
1	1CE17CV028	SANGAMESH
2	1CE18CV003	HITHESH U K
3	1CE18CV004	KUSHAL S GOWDA
4	1CE18CV005	MAHADEVA PRASAD S A
5	1CE18CV006	OWAIS AHMAD KHANDAY
6	1CE18CV007	ROHITH C N
7	1CE18CV008	SANDYA U B
8	1CE18CV009	SUSHANTH CHRISTY A
9	1CE18CV010	TEJASWINI S
10	1CE18CV011	JAGADISH V
11	1CE17CV030	SHAKUNTHALA C M
12	1CE19CV001	APOORVA C
13	1CE19CV003	RAVITEJA S
14	1CE19CV004	VEENA G
15	1CE20CV400	RAJASHEKAR PRASAD V

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CITY ENGINEERING COLLEGE

Doddakallasandra, Bangalore-560061

Department of Civil Engineering
Course on Advanced Survey Instruments
Attendance List of Enrolled Students

Sl. No	USN	Name	13/12/21	14/12/21	15/12/21	16/12/21	17/12/21	Signature
1	1CE17CV028	SANGAMESH	P	A	P	P	P	
2	1CE18CV003	HITHESH U K	P	P	P	P	P	
3	1CE18CV004	KUSHAL S GOWDA	P	P	A	P	P	
4	1CE18CV005	MAHADEVA PRASAD S A	P	P	P	P	P	
5	1CE18CV006	OWAIS AHMAD KHANDAY	P	P	A	P	P	
6	1CE18CV007	ROHITH C N	P	P	P	A	P	
7	1CE18CV008	SANDYA U B	P	P	P	P	P	
8	1CE18CV009	SUSHANTH CHRISTY A	P	P	P	P	P	
9	1CE18CV010	TEJASWINI S	P	P	P	P	P	
10	1CE18CV011	JAGADISH V	P	A	P	P	P	
11	1CE17CV030	SHAKUNTHALA C M	P	P	P	P	P	
12	1CE19CV001	APOORVA C	P	P	P	P	P	
13	1CE19CV003	RAVITEJA S	P	P	P	P	P	
14	1CE19CV004	VEENA G	P	P	P	P	P	
15	1CE20CV400	RAJASHEKAR PRASAD V	P	A	P	P	P	

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Department of Civil Engineering
Course on Advanced Survey Instruments
Assessment Questions for the Course

1. What is a Total Station?
   a. A device for measuring total area
   b. **A device for measuring angles and distances electronically**
   c. A tool for measuring temperature
   d. A device for measuring wind speed
2. Which of the following is NOT a component of a Total Station?
   a. EDM (Electronic Distance Measurement)
   b. **Theodolite**
   c. Display and keypad
   d. Battery pack
3. The EDM in a Total Station is used for:
   a. Measuring angles
   b. **Measuring distances**
   c. Displaying coordinates
   d. Storing data
4. What does a reflectorless Total Station measure?
   a. Angles only
   b. **Distances without a reflector**
   c. Temperature
   d. Speed of light
5. Which method is typically used to measure horizontal angles in a Total Station?
   a. Magnetic compass
   b. GPS
   c. Electronic sensors
   d. **Optical means**
6. Which technology enables a Total Station to calculate distances accurately?
   a. GPS
   b. Infrared beams
   c. **Laser pulses**
   d. Radio waves
7. What type of coordinate system is commonly used with Total Stations?
   a. Polar coordinates
   b. **Cartesian coordinates**
   c. Spherical coordinates
   d. Cylindrical coordinates
8. What is the purpose of leveling a Total Station?
   a. To adjust for curvature of the Earth
   b. **To align the instrument vertically**
   c. To measure atmospheric pressure
   d. To synchronize with GPS satellites
9. Which feature of a Total Station allows it to store collected data?
   a. **Internal memory**
   b. Bluetooth connectivity
   c. Real-time data transfer
   d. Cloud storage

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10. What does the acronym EDM stand for in the context of Total Stations?
    a. **Electronic Distance Measurement**
    b. Efficient Data Management
    c. Environmental Data Module
    d. Electronic Distance Mapper
11. Which instrument is used to measure vertical angles in a Total Station?
    a. Compass
    b. Protractor
    c. **Clinometer**
    d. Level vial
12. Which measurement is typically displayed on the screen of a Total Station during operation?
    a. Atmospheric pressure
    b. Temperature
    c. Distance to the nearest tree
    d. **Horizontal and vertical angles**
13. What is the range of typical accuracy for distance measurements with a Total Station?
    a. 1 meter
    b. **10 centimeters**
    c. 1 millimeter
    d. 1 kilometer
14. Which environmental factor can affect the accuracy of a Total Station's measurements?
    a. Wind speed
    b. Cloud cover
    c. Temperature
    d. **All of the above**
15. What does a prism do in relation to a Total Station?
    a. **Reflects laser pulses back to the Total Station**
    b. Absorbs heat from the Total Station
    c. Measures magnetic fields
    d. Filters out infrared light
16. Which type of Total Station is commonly used for monitoring movements in structures?
    a. Reflectorless
    b. **Robotic**
    c. Manual
    d. Motorized
17. What does the acronym GUI stand for in Total Station software?
    a. **Graphical User Interface**
    b. Global Understanding Interface
    c. General Usage Indicator
    d. Geographic User Input
18. Which factor is NOT typically considered when choosing a Total Station for a specific project?
    a. Accuracy requirements
    b. Cost
    c. **Manufacturer's location**
    d. Environmental conditions

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19. Which instrument is used to measure slope distances in a Total Station?
    a. Inclinometer
    b. Compass
    c. Rangefinder
    d. Altimeter
20. Which feature of a Total Station allows it to track a moving prism automatically?
    a. GPS
    b. Robotic control
    c. Laser lock
    d. Wi-Fi connectivity
21. What is the purpose of calibrating a Total Station?
    a. To adjust for atmospheric pressure
    b. To align the internal sensors
    c. To check and adjust measurement accuracy
    d. To synchronize with GPS satellites
22. Which measurement parameter is essential for calculating precise coordinates using a Total Station?
    a. Humidity
    b. Altitude
    c. Azimuth
    d. Time of day
23. Which Total Station component allows data to be transferred to a computer for processing?
    a. Prism
    b. EDM
    c. USB port
    d. GPS receiver
24. Which type of Total Station is operated remotely using a controller?
    a. Reflectorless
    b. Robotic
    c. Manual
    d. Motorized
25. Which software is commonly used for processing data collected with a Total Station?
    a. CAD
    b. GIS
    c. CAM
    d. All of the above

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Department of Civil Engineering
Course on Advanced Survey Instruments
Assessment Marks of Enrolled Students

Sl. No.	USN	Name	Marks
1	1CE17CV028	SANGAMESH	18
2	1CE18CV003	HITHESH U K	23
3	1CE18CV004	KUSHAL S GOWDA	20
4	1CE18CV005	MAHADEVA PRASAD S A	19
5	1CE18CV006	OWAIS AHMAD KHANDAY	22
6	1CE18CV007	ROHITH C N	21
7	1CE18CV008	SANDYA U B	24
8	1CE18CV009	SUSHANTH CHRISTY A	24
9	1CE18CV010	TEJASWINI S	23
10	1CE18CV011	JAGADISH V	21
11	1CE17CV030	SHAKUNTHALA C M	20
12	1CE19CV001	APOORVA C	21
13	1CE19CV003	RAVITEJA S	21
14	1CE19CV004	VEENA G	23
15	1CE20CV400	RAJASHEKAR PRASAD V	22

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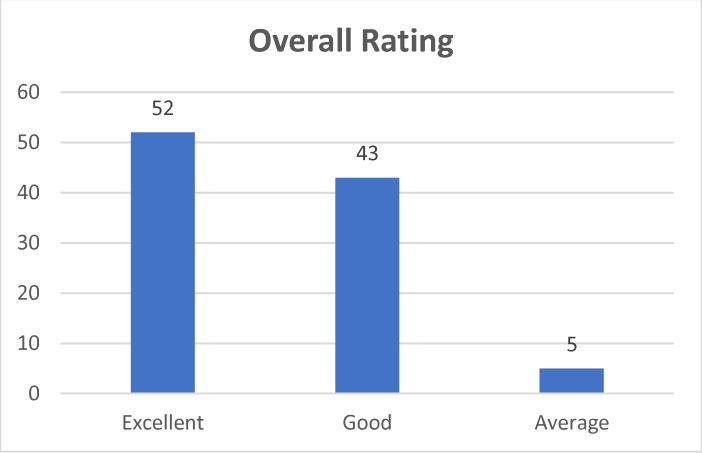
Department of Civil Engineering

Course on Advanced Survey Instruments

Enrolled Students Feedback Analysis

Sample Feedback Analysis of students:

Name of the Participant	Course objectives were stated clearly and met	The Course content was well organized	Course enhanced my skills	Classes were interesting & interactive	Give overall rating
OWAIS AHMAD KHANDAY	Neutral	Agree	Agree	Agree	Average
ROHITH C N	Agree	Agree	Agree	Agree	Good
SANDYA U B	Agree	Agree	Agree	Agree	Good
SUSHANTH CHRISTY A	Neutral	Agree	Agree	Neutral	Excellent
TEJASWINI S	Agree	Agree	Agree	Agree	Average
JAGADISH V	Agree	Neutral	Neutral	Agree	Good
SHAKUNTHALA C M	Agree	Agree	Agree	Agree	Good
APOORVA C	Neutral	Neutral	Agree	Agree	Excellent
RAVITEJA S	Agree	Agree	Agree	Agree	Excellent
VEENA G	Agree	Agree	Agree	Agree	Good



Feedback response from the Value-added course conducted from 13-12-21 to 17-12-21 on Advanced Survey Instruments is very effective & lead to better job prospects & career advancement.

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CITY ENGINEERING COLLEGE

Doddakallasandra, Bangalore-560061

Date:17/12/2021

To,

Mr. Yashwanth
Lawrence & Mayo
No.76/1, 2nd Floor AMR Complex,
Mission Rd, Sudhama Nagar,
Bengaluru

Dear Mr. Yashwanth,

Subject: Letter of appreciation for conducting Course on Advanced Survey Instruments.

We express our sincere gratitude for your invaluable and exemplary service rendered as a resource person for the **Course on Advanced Survey Instruments** from 13th to 17th December 2021 conducted by Department of Civil Engineering, City Engineering College, Bangalore.

Thanking You,

Sincerely,

Dr. Thippeswamy H N
Principal
CEC

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Doddakallasandra, Bangalore-560061

Department of Civil Engineering

Course on Advanced Survey Instruments

Course Objectives

After completion of the course, the trainees should be able to:

1. To make students aware with different advance surveying methodologies applied to carry out large scale survey works as modern instruments have largely changed the approach to survey works with the principles being same.
2. To provide knowledge of Total Station & advanced surveying instruments.
3. Develop skills in using Total Station & advanced surveying instruments and analyse data.
4. Develop ability to transform basic concept of surveying to field practice.

Course Outcomes

The students will be able to:

1. Use total station in the field of civil engineering land survey.
2. Summarize the basic principles of GPS and GIS in civil engineering.
3. Show effectiveness of modern surveying instruments to improve accuracy and to save time and for surveying operations.
4. Manage the suggested or identified constructional problems, solve in teams, in order to improve future problem-solving ability and able to present it.

Mr. Vinay Kumar S N
Course Coordinator
Assistant Professor
Department of Civil Engineering

Dr. Thippeswamy H N
HOD
Department of Civil Engineering

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Doddakallasandra, Bangalore-560061

DEPARTMENT OF CIVIL ENGINEERING

REPORT OF COURSE ON ADVANCED SURVEY INSTRUMENTS

The Department of Civil Engineering, City Engineering College, Bengaluru had organized the course on Advanced Survey Instruments from 13th to 17th December 2021 in association with Ms Lawrence and Mayo, Bangalore. Our Principal, Dr. Thippeswamy H N, inaugurated the event. He also asked the students to make best use of the course. Administrative officer Mr Sathish Hande, Vice Principal Dr Jyothi, Administrative officer Dr Rajashekar, staff and students of civil dept. were present. Mr. Vinay Kumar S N, Asst. Prof., Department of Civil Engineering introduced the speaker. The speaker explained about importance of Total station, GPS & how to operate it. Mr. Jayanth K S, Asst. Prof., Department of Civil Engineering gave vote of thanks.

Fig:1 Dr. Thippeswamy H. N., Principal & Dr. Jyothi, Vice Principal along with Resource person & students

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Fig:2 Students practicing Survey using Total Station

Fig:3 Resource person explaining about Total Station

Mr. Vinay Kumar S N
Course Coordinator
Assistant Professor
Department of Civil Engineering

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Dr. Thippeswamy H N
HOD
Department of Civil Engineering

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Department of Civil Engineering

CERTIFICATE OF PARTICIPATION

This certificate is proudly presented to

SANDYA U B

1CE18CV008

In Recognition of his/her valuable participation in the Five days' course on

Advanced Survey Instruments from 13th to 17th December 2021.

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This certificate is proudly presented to

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TEJASWINI S

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CERTIFICATE OF PARTICIPATION

This certificate is proudly presented to

APOORVA C

1CE19CV001

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This certificate is proudly presented to

VEENA G

1CE19CV004

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PRINCIPAL

CITY ENGINEERING COLLEGE

Department of Mechanical Engineering

Academic Year 2021 – 2022

Course

On

CRDi

Date 21-09-21 to 25-09-21

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PRINCIPAL
CITY ENGINEERING COLLEGE
Kanakapura Main Road, Bangalore-560061

CITY
ENGINEERING COLLEGE

Date: 03-09-2020

To

The principal
City Engineering College
Bangalore

Sub: Regarding Permission to conduct Course on "**CRDi**".

Respected Sir,

1) We would like to conduct a Course on "**CRDi**" for final year students from Date 21-09-21 to 25-09-21. It helps the student to have an understanding deficiency of conventional diesel engines which were sluggish, noisy and poor in performance when implemented especially in passenger vehicles.

   So, I request you to permit us to conduct this course. Kindly do the needful.

Yours Sincerely

S. Karunakara

Dr.S.Karunakara
HOD

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CITY ENGINEERING COLLEGE
Kanakapura Main Road, Bangalore-560061

CITY ENGINEERING COLLEGE

Circular No: CEC/ME/C1/ACY2021-22/01

Date: 18/09/2021

CIRCULAR

Sub: Conducting a Course on "**CRDi**"

This is to inform all the final-year students that our department is going to conduct a 5-day Course on "**CRDi**" from Date 21-09-21 to 25-09-21**.** Thank you for your attention and we look forward to your active participation.

Yours Sincerely

S. Karunakara

Dr.S.Karunakara

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Kanakapura Main Road, Bangalore-560061

CITY ENGINEERING COLLEGE

(Approved by AICTE New Delhi & Affiliated by VTU, Belagavi)

Near Metro Station, Doddakallasandra

Bangalore – 560 062.

Value Added Course on CRDi

Date: 21-09-21 to 25-09-21

Venue : Seminar Hall

Organized by

Department of Mechanical Engineering

City Engineering College

Bangalore-560062

www.cityengineeringcollege.ac.in

Advisory Committee

Chief Patron

Dr. K R Paramahamsa

MBA, L.L.B., Ph.d. (USA), D. Litt,
Honorable Chairman
AMC – City Group of Institutions.

Patrons

Smt. Geetha Paramahamsa

Honorable Vice Chairperson,
AMC – City Group of Institutions.

Ms. Monica Kalluri

Honorable Vice – President
AMC – City Group of Institutions.

Mr. Rahul Kalluri

Honorable Executive – President
AMC – City Group of Institutions.

Dr. V.S. Ramamurthy

Principal, City Engineering college

Dr. Jyothi. P

Vice Principal, HOD,
Dept of Mathematics, CEC.

About College

City Engineering College, Bangalore affiliated to Visvesvaraya Technological University (VTU) is centrally located in Bangalore. The College has expanded over the last 19 years with sophisticated infrastructure as a part of the Institution's commitment to provide higher quality education in the area of Engineering. The highly facilitated landmark building – provides a perfect ambience for creativity and learning. City Engineering College is known for its academic excellence, friendly welcoming atmosphere and community spirit. Over large number of full time students study here in a wide range of programs. It is a center of talented, experienced teachers who inspire and energize the students to achieve the best.

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About the Department of Mechanical Engineering

The Department of Mechanical Engineering was established in 2005with an annual intake of 120 students in the undergraduate Programme. The Department of Mechanical Engineering has state-of-the-art laboratories; these laboratories not only satisfy the curriculum requirements of the students very lucidly but also provide additional facilities to enhance the practical knowledge. The department consists of a team of well qualified teaching staff having Master degrees and Doctorates. The staff members of the Mechanical Department have taken up projects funded by external agencies like KSCST, VGST and VTU. The department received a grant of Rs. 5 Lakh in the year 2019 from VGST to carry out research on Advanced Materials in Green Energy. The Department also has a Research center approved by VTU.

Expert Speakers for the Program

Dr.Nanda Kumar MB
Associate Professor
Dayananda Sagar College of Engineering
Bengaluru

Convener

Dr. S. Karunakara
Professor and Head,
Department of Mechanical Engineering.

Coordinator
Mr. Harsha Vardhan U
Assistant Professor,
Department of Mechanical Engineering.

About CRDi

The Common Rail Direct Injection (CRDI) system stands as a cornerstone of modern diesel engine technology, revolutionizing the efficiency, performance, and emissions characteristics of these powertrains. By precisely controlling the fuel delivery process through a high-pressure common rail, the CRDI system has transformed combustion dynamics, resulting in enhanced power output, reduced fuel consumption, and decreased emissions. This innovative approach has reshaped the landscape of diesel engines, ushering in an era of cleaner, more fuel-efficient, and environmentally conscious transportation.

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CITY ENGINEERING COLLEGE

Department of Mechanical Engineering

Course on CRDi

Schedule

Academic Year: 2021-22 Venue: Seminar Hall

Date	Session 1 (9:15 – 11:15)	Session 2 (11:30 – 1:30)		Session 3 (2:00 – 4:00)
21-09-2021	Introduction about CRDi	Engine Systems & Components		Fuel System (SI Engine), Carburetion & Injection, process & parameters, properties of A/F mixture,
22-09-2021	Requirements of A/F ratios as per different operating conditions, Carburettors, types.	Aircraft carburettor, comparison of Carburetion & injection, F/A ratio calculations.		CI engine
23-09-2021	Mixture requirements & constraints	Method of injection, Injection systems, CRDI etc	Lunch Break (1:30 – 2:00)	system components, pumps injectors
24-09-2021	Ignition system:	Conventional & Modern ignition systems Magneto v/s Battery,		CB point v/s Electronic ignition
25-09-2021	Fuel Ignition Energy requirements.	.Spark advance,		centrifugal, vacuum Firing order, spark plugs.

Course Coordinator

Mr. Harshavardhan U

Assistant Professor
Department of Mechanical Engineering

Dr.S.Karunakara

HOD
Department of Mechanical Engineering

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Department of Mechanical Engineering

Course on CRDi

Course Content

Module 1: Engine Systems & Components: Fuel System (SI Engine), Carburetion & Injection, process & parameters, properties of A/F mixture,

Module-2:Requirements of A/F ratios as per different operating conditions, Carburettors, types, Aircraft carburettor, comparison of Carburetion & injection, F/A ratio calculations.

Module-3: CI engine: Mixture requirements & constraints, Method of injection, Injection systems, CRDI etc.

Module-4:system components, pumps injectors .Ignition system: Conventional & Modern ignition systems Magneto v/s Battery, CB point v/s Electronic ignition,

Module-5: Fuel Ignition Energy requirements. Spark advance, centrifugal, vacuum Firing order,spark plugs.

Course Coordinator

Mr.Harsha Vardhan U
Assistant Professor
Department of Mechanical Engineering

HOD

Dr.S.Karunakara
HOD
Department of Mechanical Engineering

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Department of Mechanical Engineering

Course on CRDi

Resource Person Profile

D.R.NANDA KUMAR MB

Associate Professor

Dayananda sagar college of Engineering

About the Speaker:

Nandakumar M. B. Associate Professor, Dept of Automobile Engineering.
Dayananda Sagar College of Engineering, Bangalore – 61

Mobile no: 9900826039;

Email id: nandakumarmb@gmail.com

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Department of Mechanical Engineering

Course on CRDi

Student List

SL. NO.	USN	NAME
1	1CE17ME004	CHANDRASHEKAR
2	1CE17ME009	HARSHITH MAHADEV
3	1CE17ME016	NITHIN G
4	1CE17ME030	SATHISH KUMAR
5	1CE17ME041	VIJAYKUMAR
6	1CE18ME001	AATHMA K N
7	1CE18ME002	GANGADHAR G JADI
8	1CE18ME005	KARTHIK S
9	1CE18ME006	MAHESH S
10	1CE18ME008	PRADEEP S
11	1CE18ME009	RASHMI R
12	1CE18ME010	SHASHANK N
13	1CE19ME400	SACHIN BJ

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Department of Mechanical Engineering
Course on Course on CRDi

Attendance List

Sl. No	USN	Name	21-09-2021	22-09-2021	23-09-2021	24-09-2021	25-09-2021	Signature
1	1CE17ME004	CHANDRASHEKAR	P	A	P	P	P	
2	1CE17ME009	HARSHITH MAHADEV	P	P	P	P	A	
3	1CE17ME016	NITHIN G	P	P	P	P	P	
4	1CE17ME030	SATHISH KUMAR	P	P	P	A	P	
5	1CE17ME041	VIJAYKUMAR	P	P	P	P	P	
6	1CE18ME001	AATHMA K N	P	P	P	P	P	
7	1CE18ME002	GANGADHAR G JADI	P	P	P	P	P	
8	1CE18ME005	KARTHIK S	P	P	P	P	P	
9	1CE18ME006	MAHESH S	P	P	P	P	P	
10	1CE18ME008	PRADEEP S	P	P	P	P	P	
11	1CE18ME009	RASHMI R	P	P	P	P	P	
12	1CE18ME010	SHASHANK N	P	P	P	P	P	
13	1CE19ME400	SACHIN BJ	P	P	P	P	P	

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CITY ENGINEERING COLLEGE

Department of Mechanical Engineering
Course on CRDi
Assessment

1. The working cycle in case of four stroke engine is completed in following number of revolutions of crankshaft

(a) 1/2 (b) 1 (c) 2 (d) 4 (e) 8.

Ans: c

2. In a diesel engine, the fuel is ignited by

(a) spark

(b) injected fuel

(c) heat resulting from compressing air that is supplied for combustion

(d) ignition

(e) combustion chamber.

Ans: c

3. Scavenging air in diesel engine means

(a) air used for combustion sent under pressure

(b) forced air for cooling cylinder

(c) burnt air containing products of combustion

(d) air used for forcing burnt gases out of engine's cylinder during the exhaust period

(e) air fuel mixture.

Ans: d

4.The air requirement of a petrol engine during starting compared to theoretical air required for complete combustion is

(a) more (b) loss (c) same (d) may be more or less depending on engine capacity (e) unpredictable. Ans: b

5. The inlet value of a four stroke cycle I.C engine remains open for nearly

(a) 180° (b) 125° (c) 235° (d) 200° (e) 275°.

Ans: c

6. Pick up the false statement

(a) Thermal efficiency of diesel engine i about 34%

(b) Theoretically correct mixture of air am petrol is approximately 15 : 1

(c) High speed compression engines operate on dual combustion cycle

(d) Diesel engines are compression ignition engines

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(e) S.I. engines are quality-governed engines.

Ans: e

7. The specific fuel consumption per BH hour for a petrol engine is approximately

(a) 0.15 kg (b) 0.2 kg (c) 0.25 kg (d) 0.3kg (e) 0.35 kg.

Ans: c

8. In the crankcase method of scavenging, the air pressure is produced by

(a) supercharger (b) centrifugal pump (c) natural aspirator (d) movement of engine piston (e) reciprocating pump.

Ans: d

9. In loop scavenging, the top of the piston is

(a) flat (b) contoured (c) slanted (d) depressed (e) convex shaped

Ans: b

10. Which is more viscous lub oil

(a) SEA 30 (b) SAE 4£ (c) SAE 50 (d) SAE 70 (e) SAE 80.

Ans: e

11. The air-fuel ratio in petrol engines-is controlled by

(a) controlling valve opening/closing (b) governing (c) injection (d) carburettion (e) scavenging and supercharging.

Ans: d

12. A diesel engine has (a) 1 valve (b) 2 valves (b) 3 valves (d) 4 valves (e) no valve.

Ans: c

13. The following volume of air is required for consuming 1 liter of fuel by a four stroke engine

(a) 1 m3 (b) 5 m3 (c) 5-6 m3 (d) 9-10 m3 (e) 15-18 m3.

Ans: d

14. For maximum power generation, the air fuel ratio for a petrol engine for vehicles, is of the order of
(a) 9 : 1 (b) 12 : 1 (c) 15 : 1 (d) 18 : 1 (e) 20: 1.

Ans: b

15. Scavenging is usually done to increase

(a) thermal efficiency (b) speed (c) power output (d) fuel consumption (e) all of the above.

Ans: c

16. For the same power developed in I.C. engines, the cheaper system is

(a) naturally aspirated (b) supercharged (c) centrifugal pump (d) turbo charger (e) none of the above.
Ans: b

17.The minimum cranking speed in case of petrol engine is about (a) half the operating speed (b) one-fourth of operating speed (c) 250-300 rpm (d) 60-80 rpm (e) 10-20 rpm

Ans: d

18. In a typical medium speed 4 stroke cycle diesel engine

(a) exhaust valve opens at 35° before bot-tom dead center and closes at 20° after top dead center

(b) exhaust valve opens at bottom ‘dead center and closes at top dead center

(c) exhaust valve opens just after bottom dead center and closes just before top dead center

(d) may open and close anywhere

(e) none of the above is true.

Ans: a

19. The minimum cranking speed in case of petrol engine is about

(a) half the operating speed (b) one-fourth of operating speed (c) 250-300 rpm (d) 60-80 rpm (e) 10-20 rpm

Ans: d

20. The operation of forcing additional air under pressure in the engine cylinder is known as

(a) scavenging (b) turbulence (c) supercharging (d) pre-ignition (e) dissociation and carburretion of fuel.

Ans: c

21.The fuel air ratio in a petrol engine fitted with suction carburettor, operating with dirty air filter as compared to clean filter will be

(a) higher (b) lower (c) remain unaffected (d) unpredictable (e) none of the above.

Ans: a

22. Which of the following is false statement : Excess quantities of sulphur in diesel fuel are Objectionable because it may cause the following

(a) piston ring and cylinder wear (b) formation of hard coating on piston skirts (c) oil sludge in the engine crank case (d) detonation (e) forms corrosive acids.

Ans: d

23. . In a cycle, the spark lasts roughly for

(a) 1 sec (b) 0.1 sec (c) 0.01 sec (d) 0.001 sec (e) 0.0001 sec. Ans: d

24. . A diesel engine as compared to petrol engine (both running ar rated load) is

(a) more efficient (b) less efficient (c) equally efficient (d) unperdictable (e) other factors will decide it.

Ans: a

25. Most high speed compression engines operate on

(a) Otto cycle (b) Diesel cycle (c) Dual cycle (d) Carnot cycle (e) Two stroke cycle.

Ans: c

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CITY ENGINEERING COLLEGE

Department of Mechanical Engineering
Course on Course on CRDi

Assessment Marks

Sl. No	USN	Name	Marks
1	1CE17ME004	CHANDRASHEKAR	21
2	1CE17ME009	HARSHITH MAHADEV	19
3	1CE17ME016	NITHIN G	18
4	1CE17ME030	SATHISH KUMAR	23
5	1CE17ME041	VIJAYKUMAR	24
6	1CE18ME001	AATHMA K N	23
7	1CE18ME002	GANGADHAR G JADI	21
8	1CE18ME005	KARTHIK S	22
9	1CE18ME006	MAHESH S	23
10	1CE18ME008	PRADEEP S	21
11	1CE18ME009	RASHMI R	20
12	1CE18ME010	SHASHANK N	20
13	1CE19ME400	SACHIN BJ	22

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Department of Mechanical Engineering

Course on Course on CRDi

Feedback Analysis

Sample Feedback

Name of the Participant	Course objectives were stated clearly and met	The Course content was well organized	Course enhanced my skills	Classes were interesting and interactive	Give overall rating
NITHIN G	Agree	Agree	Agree	Agree	Average
SATHISH KUMAR	Agree	Neutral	Neutral	Neutral	Good
VIJAYKUMAR	Agree	Agree	Agree	Agree	Good
AATHMA K N	Agree	Agree	Agree	Neutral	Excellent
GANGADHAR G JADI	Agree	Agree	Neutral	Agree	Average
KARTHIK S	Neutral	Neutral	Neutral	Agree	Good
MAHESH S	Agree	Agree	Neutral	Agree	Good
PRADEEP S	Neutral	Neutral	Agree	Neutral	Excellent
RASHMI R	Agree	Neutral	Agree	Agree	Average
SHASHANK N	Agree	Agree	Agree	Agree	Good

The above graph indicates 47% of Excellent, 45% of Good & 8% of Average rating given by the students after completion of course.

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CITY
ENGINEERING COLLEGE

Date:11/09/2020

To,

D.R. Nandakumar MB
Senior Environmental Officer,
Enviro Care Cell,
Karnataka State Pollution Control Board,
Bangalore

Dear D.R. Nandakumar MB,

Subject: Letter of appreciation for conducting Course on CRDi.

We express our sincere gratitude for your invaluable and exemplary service rendered as a resource person for the **Course on CRDi** from 21th to 25th September 2021 conducted by Department of Mechanical Engineering, City Engineering College, Bangalore.

Thanking You,

Sincerely,

Dr. Thippeswamy HN
Principal
CEC

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CITY ENGINEERING COLLEGE

Department of Mechanical Engineering

Course on CRDi

Objective:

- To understand the deficiencies of conventional diesel engines which were sluggish, noisy and poor in performance when implemented especially in passenger vehicles.
- Most modern engine's fuel systems use 'Common Rail Direct Injection' or CRDi which is an advanced technology. Specifically, the term 'CRDi' commonly refers to diesel engines

Course Outcomes

Upon completion of the course students should be able to:

- Apply diesel engine knowledge to diesel fuel injection systems functions and how they relate to engine operation and performance.
- Competently troubleshoot, evaluate and repair diesel fuel injection systems.
- Disassemble, test, and reassemble fuel injection components.
- Test diesel engines for fuel system malfunctions.
- Apply knowledge of diesel fuels and fuel injection systems and how they relate to engine performance.
- Research and locate repair literature.

Course Coordinator

Mr. Harsha Vardhan U
Assistant Professor
Department of Mechanical Engineering

HOD

Dr.S.Karunakara
HOD
Department of Mechanical Engineering

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DEPARTMENT OF MECHANICAL ENGINEERING

REPORT OF COURSE ON CRDi

The Department of Mechanical Engineering, City Engineering College organized the course on "**CRDi**" by Sri Dr.Nandakumar MB, Associate professor,DSCE, Bangalore from 21th to 25th September 2021 in Seminar Hall, Department of Mechanical Engineering. Mr. Sampath HP, Asst. Prof., Department of Mechanical Engineering welcomed the speaker and audience. Dr. S.Karunakara., Prof. and Head, welcomed the speaker by presenting the medicinal plant to the speaker. Mr.Anil Kumar R, Asst. Prof., Department of Mechanical Engineering introduced the speaker.

Fig:1 Speaker addressing Students

Course Coordinator

Mr.Harsha Vardhan U
Assistant Professor
Department of Mechanical Engineering

HOD

Dr.S.Karunakara
HOD
Department of Mechanical Engineering

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CERTIFICATE OF PARTICIPATION

From the Department of Mechanical Engineering this certificate is proudly presented to

Chandrashekar

1CE17ME004

In Recognition of his/her valuable participation in the Five days' Course on
CRDi from 21th to 25th September 2021.

HOD
Dr.S.Karunakara

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PRINCIPAL
Dr. Thippeswamy HN

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From the Department of Mechanical Engineering this certificate is proudly presented to

Sachin BJ

1CE19ME400

In Recognition of his/her valuable participation in the Five days' Course on CRDi from 21th to 25th September 2021.

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Dr.S.Karunakara

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PRINCIPAL
Dr. Thippeswamy HN

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From the Department of Mechanical Engineering this certificate is proudly presented to

Nithin G

1CE17ME016

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Mahesh S

1CE18ME006

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Dr. Thippeswamy HN

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From the Department of Mechanical Engineering this certificate is proudly presented to

Karthik S

1CE18ME005

In Recognition of his/her valuable participation in the Five days' Course on CRDi from 21th to 25th September 2021.

HOD
Dr.S.Karunakara

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PRINCIPAL
Dr. Thippeswamy HN

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CERTIFICATE OF PARTICIPATION

From the Department of Mechanical Engineering this certificate is proudly presented to

Shashank

1CE18ME010

In Recognition of his/her valuable participation in the Five days' Course on
CRDi from 21th to 25th September 2021.

HOD
Dr.S.Karunakara

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Dr. Thippeswamy HN

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CERTIFICATE OF PARTICIPATION

From the Department of Mechanical Engineering this certificate is proudly presented to

Sathish Kumar

1CE17ME030

In Recognition of his/her valuable participation in the Five days' Course on CRDi from 21th to 25th September 2021.

HOD
Dr.S.Karunakara

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ADD-ON COURSE
"PYTHON USING ARDUINO 3.0"

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PRINCIPAL
CITY ENGINEERING COLLEGE
Kanakapura Main Road, Bangalore-560061

CITY ENGINEERING COLLEGE

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

To,
The principal,
City Engineering College,
Bengaluru-560062

Respected Sir,

Sub: Conduction of Add-On course on Python using Arduino 3.0

Python and Arduino have long been a powerful combination for makers, hobbyists, and engineers interested in blending software and hardware for innovative projects. Combining Python with Arduino 3.0 offers an exciting and powerful approach to building advanced electronics projects.

Integrating Python with Arduino opens up several possibilities for creating and controlling sophisticated systems. By combining the versatility of Python with the power of Arduino, students will be well-equipped to tackle innovative projects in electronics.

Hence, we seek your permission to conduct Add-on course on Python using Arduino 3.0 for fifth Semester students from 23/08/2021 to 27/08/2021.

PRINCIPAL
CITY ENGINEERING COLLEGE
Kanakapura Main Road, BANGALORE - 560 061

Yours faithfully,

G S Mallikarjuna
HOD, ECE

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Kanakapura Main Road, Bangalore-560061

CITY ENGINEERING COLLEGE

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Add-On course on

"Python using Arduino 3.0"

Ref. No. CEC/ECE/Cr-1/1.2.1/ACY:2021-22/OR-01 Date: 04/08/2021

CIRCULAR

This is to inform all the concerned that a five-day Add-On course on **Python using Arduino 3.0** by Mr. Skanda Kumar T.R, Software Engineer, Bosch India Pvt Ltd. Bangalore, has been organized on 23/08/2021 to 27/08/2021 for 5th semester students. All the students have to participate compulsorily for the same. Attendance will be viewed strictly.

G S Mallikarjuna
HOD, ECE

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Approved by AICTE New Delhi and affiliated by VTU, Belagavi
Doddakallasandra, Off Kanakapura Main Road,
Next to Gokulam Apartment, Bangalore – 560062

Five-day Add-on course

"Python using Arduino 3.0"

(23/08/2021 – 27/08/2021)

Organized by

Department of Electronics & Communication Engineering
City Engineering College
Bangalore 560062

Chief Patron

Dr. K.R. Paramahamsa
Chairman,
MBA, Ph.D. (USA). D. Lit
AMC – City group of Institutions, Bengaluru.

Patrons

Dr. Thippeswamy H N
Principal, CEC, Bengaluru

Dr. Jyothi P
Vice- Principal, CEC, Bengaluru

Dr. Sowmya Naik P.T.
Executive Officer, CEC, Bengaluru

Convener
G.S Mallikarjuna
HOD, ECE, CEC, Bengaluru

Coordinator
Dr. Shalini Prasad
Professor
Dept. of Electronics & Communication Engineering
Mobile: +91 9449445388
Email: shaliniprasad5@gmail.com

About the college

City Engineering College, Bangalore affiliated To Visvesvaraya Technological University *(VTU)* is centrally located in Bangalore. The College has expanded over the last 19 years with sophisticated infrastructure as a part of the Institution's commitment to provide higher quality education in the area of Engineering. The highly facilitated landmark building – provides a perfect ambience for creativity and learning. City Engineering College is known for its academic excellence, friendly welcoming atmosphere and community spirit. Over large number of full-time students study here in a wide range of programs. It is a centre of talented, experienced teachers who inspire and energize the students to achieve the best.

About the ECE Department

The department of Electronics and communication engineering was started in the year 2001 is known for imparting quality education. The department has good infrastructure with experienced faculties. Organizes industrial visits, workshops, technical talks, project exhibitions and training programs regularly which helps in bridging the gap between academics and industry.

About the course

Arduino 3.0 is a powerful & versatile platform that brings the worlds of hardware and software together, making it easier than ever to build interactive projects. By combining Arduino's user-friendly microcontroller boards with Python's robust programming capabilities, developers and hobbyists can create sophisticated systems with ease. Python's simplicity and readability make it an excellent choice for controlling Arduino projects, allowing for rapid prototyping and experimentation. This synergy opens up a wide range of possibilities, from automating home systems to building complex robotics. Python with Arduino 3.0 course provides a dynamic and engaging way to explore electronics and programming.

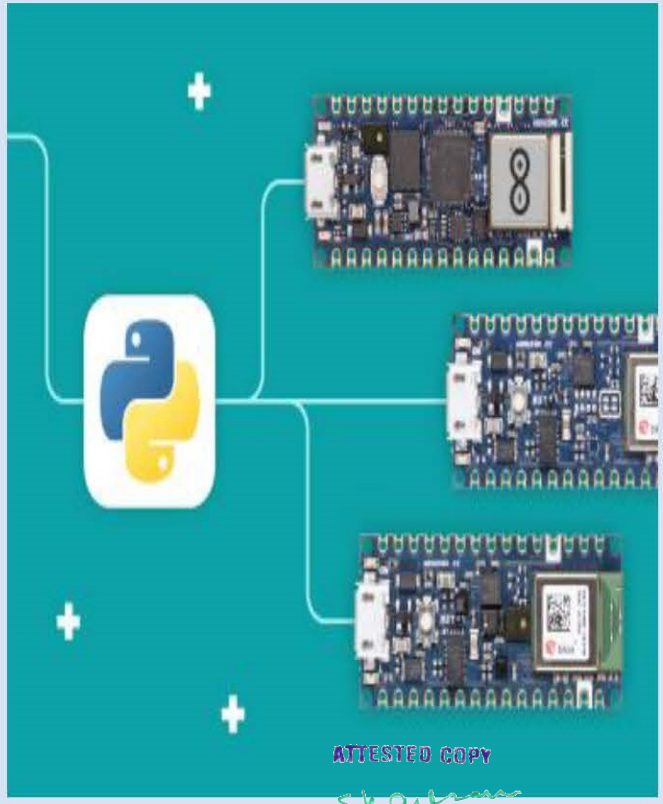
Resource Person

Mr. Skanda Kumar T R
Software Engineer
BOSCH India Pvt. Ltd.

Experience in design, development, integration and testing of Automotive Embedded Software for Electronic control units (ECUs) for Passenger Vehicle.
Good Experience working with Germany, South Korea and Vietnam Counterparts to handle system and SW requirements for Korean OEM.

Guidelines

A test (assessment questions) will be conducted by the coordinators at the end of the course. The certificates will be issued to those participants who have attended the course with minimum 80% attendance and scored minimum 60% marks in the test.



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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

"Add-On course on Python using Arduino 3.0"

Course Schedule

Day/Date	9:00am -11:00am		11:15am-1:15pm		2:00pm-4:00pm
23/08/2021	Introduction to Virtualization: exploration of various virtualization platforms like PyCharm. Arduino development tool and the first sample test codes.		Advanced virtualization concepts; management of virtual machines- starting, stopping, and pausing. Snapshots, cloning, and resource allocation.		Snapshots, cloning, and resource allocation. virtualization best practices
24/08/2021	Setting up the Firmata protocol on Arduino. Protocol management	11:00am To 11:15am	Storage management within Arduino environments. configuring mapping the constraints settings and managing storage resources	1:15pm To 2:00pm	Trigger notifications techniques and explored best practices for optimizing setups.
25/08/2021	Introduction to Arduino sensors and switches services and capabilities	**Tea Break**	Creating an higher-level apps and navigate the portal. creation and managementof Virtual Machines.	**Lunch Break**	VM extensions, customization, and an understanding of availability sets and scaling options.
26/08/2021	Develop applications with Arduino and Python; higher-level apps measuring sensors		Hands-on experience in setting up electronic circuits using fermata protocol		Firmata protocol capabilities; storage options Queue, File Storage. practical insights into working with Arduino libraries and Databases
27/08/2021	Python applications and inbuilt libraries		Data migration to Arduino and best practices in managing project databases.		Identity and access management, and monitoring/logging in Arduino.

Dr. Shalini Prasad
Coordinator

G S Mallikarjuna
HOD, ECE

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H N Thippeswamy
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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

"Add-On course on Python using Arduino 3.0"

STUDENT LIST		
5TH SEM	**ODD 2021-22**	
SL. NO.	**USN**	**NAME**
1	1CE19EC001	ANIL K
2	1CE19EC002	APOORVA KULKARNI
3	1CE19EC003	CHARAN YADAV B
4	1CE19EC005	MADHUSHREE M
5	1CE19EC006	MEENA J
6	1CE19EC007	PRAVEEN K
7	1CE19EC008	ROHANA H
8	1CE19EC009	SUPRIYA G
9	1CE19EC010	VISHWAS D V

Dr. Shalini Prasad
Coordinator

G S Mallikarjuna
HOD, ECE

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

"Add-On course on Python using Arduino 3.0"

Student Attendance

Sl No	USN	Name	23/8/2021	24/8/2021	25/8/2021	26/8/2021	27/8/2021	Sign
1	1CE19EC001	ANIL K	P	P	P	P	P	
2	1CE19EC002	APOORVA KULKARNI	P	P	P	P	P	
3	1CE19EC003	CHARAN YADAV B	P	P	P	A	P	
4	1CE19EC005	MADHUSHREE M	P	P	P	P	P	
5	1CE19EC006	MEENA J	P	P	P	P	P	
6	1CE19EC007	PRAVEEN K	P	A	P	P	P	
7	1CE19EC008	ROHANA H	P	P	P	P	P	
8	1CE19EC009	SUPRIYA G	P	P	P	P	P	
9	1CE19EC010	VISHWAS D V	P	P	P	P	P	

Dr. Shalini Prasad
Coordinator

G S Mallikarjuna
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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

"Add-On course on Python using Arduino 3.0"

Objective:

Arduino 3.0 is a powerful & versatile platform that brings the worlds of hardware and software together, making it easier than ever to build interactive projects. By combining Arduino's user-friendly microcontroller boards with Python's robust programming capabilities, developers and hobbyists can create sophisticated systems with ease. Python's simplicity and readability make it an excellent choice for controlling Arduino projects, allowing for rapid prototyping and experimentation. This synergy opens up a wide range of possibilities, from automating home systems to building complex robotics. Python with Arduino 3.0 course provides a dynamic and engaging way to explore electronics and programming.

Dr. Shalini Prasad	G S Mallikarjuna	H N Thippeswamy
Coordinator	HOD, ECE	Principal

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

"Add-On course on Python using Arduino 3.0"

Syllabus:

1. Introduction to Virtualization

Overview of Virtualization Concepts

Virtualization Platforms (e.g., PyCharm for Development Environments)

Basic Virtual Machine (VM) Operations: Starting, Stopping, and Pausing

2. Advanced Virtualization Management

Snapshots and Cloning of Virtual Machines

Resource Allocation in Virtualized Environments

Virtualization Best Practices

3. Introduction to Arduino Development

Overview of Arduino Development Tools

Basic Arduino Programming and Sample Test Codes

Introduction to Firmata Protocol

4. Firmata Protocol and Arduino Configuration

Setting Up and Managing Firmata on Arduino

Storage Management in Arduino Environments

Configuring and Mapping Storage Constraints

5. Notification Techniques and Optimization

Trigger Notifications Techniques

Best Practices for Optimizing Arduino Setups

6. Arduino Sensors and Switches

Introduction to Arduino Sensors and Switches

Services and Capabilities of Arduino Sensors

7. Creating Higher-Level Applications

Developing Higher-Level Applications with Arduino

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Navigating the Portal for VM Creation and Management

VM Extensions, Customization, Availability Sets, and Scaling Options

8. Integration with Python

Developing Applications Using Arduino and Python

Measuring and Processing Sensor Data with Python

9. Advanced Firmata Protocol and Storage Management

Firmata Protocol Capabilities and Advanced Features

Storage Options: Queue and File Storage

Working with Arduino Libraries and Databases

Dr. Shalini Prasad Coordinator	G S Mallikarjuna HOD, ECE	PRINCIPAL CITY ENGINEERING COLLEGE Kanakapura Main Road, BANGALORE - 560 061 H N Thippeswamy Principal

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"Add-On course on Python using Arduino 3.0"

Assessment Questions

1.What is the primary purpose of Arduino in an electronics project?

a) Software development b) Data analysis c) Hardware control d) Web design

2. Which library in Python is commonly used to communicate with Arduino over serial?

a) NumPy b) pySerial c) Matplotlib d) Pandas

3. Which function in the Arduino IDE is used to upload code to the Arduino board?

a) Compile b) Run c) Upload d) Execute

4. In Python, which function is used to open a serial connection to Arduino?

a) 'serial.open( )' b)' serial.start( )' c)' serial.begin( )' d) 'serial.Serial( )'

5. What is the default baud rate for serial communication in Arduino sketches?

a) 9600 b) 115200 c) 4800 d) 19200

6. Which Python library is used for plotting data?

a) Requests b) Scikit-learn c) Matplotlib d) OpenCV

7. Which Arduino function reads data from a sensor connected to a pin?

a) 'digital Write( )' b) 'analogue( )' c) 'serial Read( )' d)' pin Mode( )'

8. In Python, how do you read data from the serial port?

a) 'serial. Read( )' b) 'serial. Receive( )' c) 'serial.readline( )' d) 'serial. Get()'

9. What does the 'digitalWrite ( )' function in Arduino do?

a) Reads data from a digital sensor b) Writes a digital value to a pin

c) Reads data from an analog pin d) Writes an analog value to a pin

10.Which of the following is a correct way to initialize serial communication in Arduino?

a) 'Serial. Nit (9600);' b)'Serial. Begin (9600);'

c) 'Serial. Start (9600);' d) 'Serial. Setup (9600);'

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11.What is the purpose of the' setup ( )' function in an Arduino sketch?

a) To initialize variables b) To define the main logic of the program
c) To initialize hardware components and set pin modes d) To read sensor data

12. Which Python function is used to close a serial connection?

a) 'serial. Close ( )' b)' serial. End( )' c) 'serial. Stop( )' d) 'serial. Disconnect( )'

13. Which Arduino function is used to send data over serial communication?

a) 'serialSend()' b)' print()' c) 'Serial.print()' d) 'Serial.send()'

14. n Python, which module is used for serial communication?

a) 'serial' b) 'socket' c)' os' d) 'sys'

15. What is the function of the 'analogWrite( )' function in Arduino?

a) Reads analog data from a pin b) Writes a digital value to a pin
c) Writes an analog value to a pin d) Reads digital data from a pin

16. Which Python library is often used for data manipulation and analysis?

a) Flask b) Pandas c) TensorFlow d) Beautiful Soup

17. How do you define a serial connection with a specific port and baud rate in Python?

a) 'serial. Serial(port, baud rate)' b) 'serial. Connect(port, baud rate)'
c) 'serial. init(port, baud rate)' d)' serial. Open(port, baud rate)'

18. What does the 'loop( )' function in an Arduino sketch do?

a) Initializes the hardware b) Reads sensor data
c) Continuously executes the code within it d) Terminates the program

19. In Python, which method is used to write data to the serial port?

a) 'serial. write()' b) 'serial. send()'
c) 'serial. transmit()' d) 'serial. output()'

20. How can you ensure that Python and Arduino communicate at the same baud rate?

a) Set the baud rate in Arduino and Python to match b) Set the baud rate only in Python
c) Set the baud rate only in Arduino d)Baud rate settings are not necessary for communication

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21. What type of data does 'analogRead( )' return in Arduino?

a) Integer b) Float c) String d) Boolean

22. What is the role of 'pySerial' in a Python and Arduino project?

a) To plot data
b) To perform mathematical operations
c) To handle serial communication
d) To create graphical user interfaces

23. Which function is used in Arduino to set a pin as an input?

a) 'pin Mode(pin, INPUT)'
b) 'digitalWrite(pin, INPUT)'
c) 'analogWrite(pin, INPUT)'
d) 'setPin(pin, INPUT)'

24. Which Python library can be used for real-time data plotting and analysis?

a) Requests b) Scikit-learn c) Matplotlib d) Flask

25. How do you handle errors in Python when communicating with Arduino?

a) Using 'try' and 'except' blocks
b) Using' if' statements
c) Using 'assert' statements
d) Using 'while' loops

Key answers:

1- c	**6- c**	**11- c**	**16- b**	**21- a**
2- b	**7- b**	**12- a**	**17- a**	**22- c**
3- c	**8- c**	**13- c**	**18- c**	**23- a**
4- d	**9- b**	**14- a**	**19- a**	**24- c**
5- a	**10- b**	**15- c**	**20- a**	**25- a**

Dr. Shalini Prasad
Coordinator

G S Mallikarjuna
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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

"Add-On course on Python using Arduino 3.0"

Feedback Analysis

Sl No	USN	Name	The course materials were clear and easy to understand	The course was well-structured and the pacing was appropriate for learning Python and Arduino effectively.	The practical exercises were relevant & helped in applying the concepts learned in the course.	I received adequate support and resources to overcome challenges faced while using Python with Arduino.	The course met my expectations and I feel confident in using Python with Arduino
1	1CE19EC001	ANIL K	Strongly Agree	Agree	Disagree	Strongly Agree	Strongly Agree
2	1CE19EC002	APOORVA KULKARNI	Strongly Agree	Agree	Strongly Agree	Agree	Strongly Agree
3	1CE19EC003	CHARAN YADAV B	Agree	Agree	Disagree	Agree	Agree
4	1CE19EC005	MADHUSHREE M	Strongly Agree	Agree	Strongly Agree	Strongly Agree	Strongly Agree
5	1CE19EC006	MEENA J	Agree	Neutral	Agree	Agree	Strongly Agree
6	1CE19EC007	PRAVEEN K	Agree	Agree	Neutral	Neutral	Agree
7	1CE19EC008	ROHANA H	Strongly Agree	Disagree	Agree	Strongly Agree	Strongly Agree
8	1CE19EC009	SUPRIYA G	Agree	Neutral	Agree	Agree	Agree
9	1CE19EC010	VISHWAS D V	Strongly Agree	Disagree	Strongly Agree	Strongly Agree	Strongly Agree

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FEEDBACK ANALYSIS CHARTS

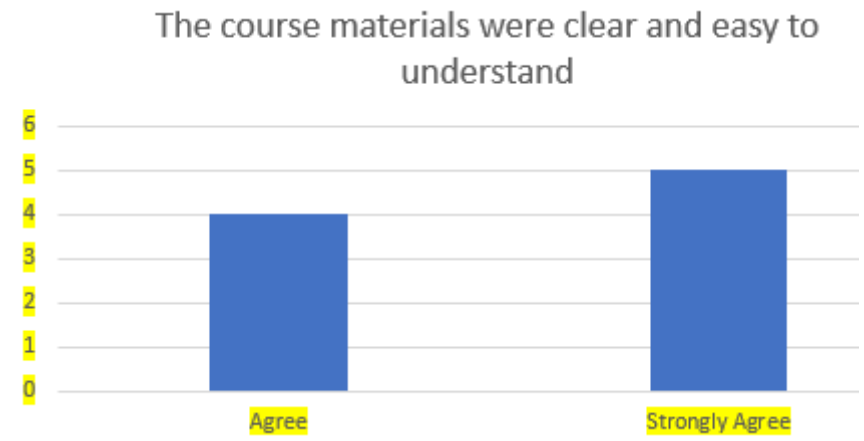

Fig:1 Chart of feedback analysis of course materials

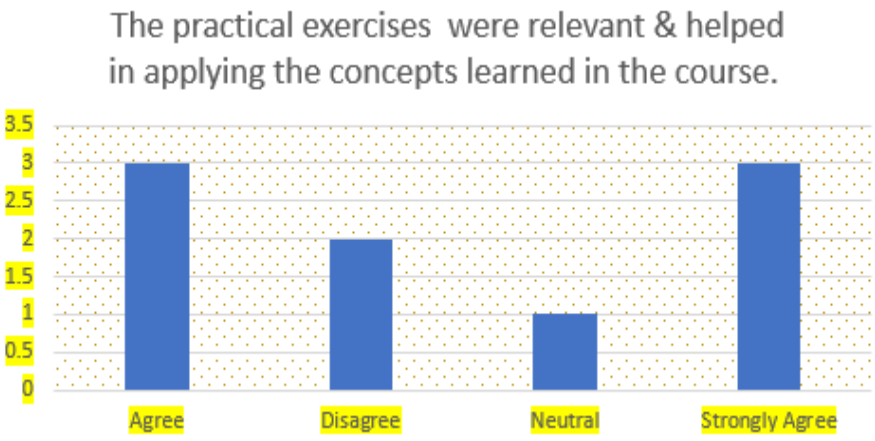

Fig:2 Chart of feedback analysis of practical exercises relevant to the course

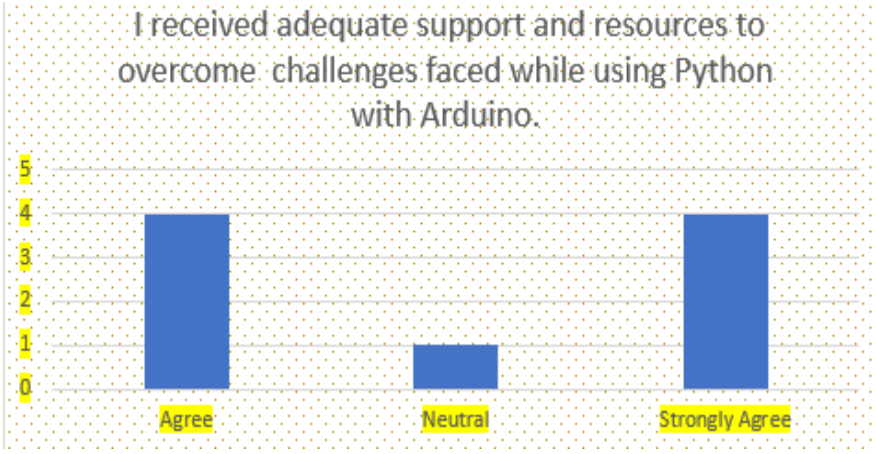

Fig:3 Chart of feedback analysis of support and resources to overcome challenges

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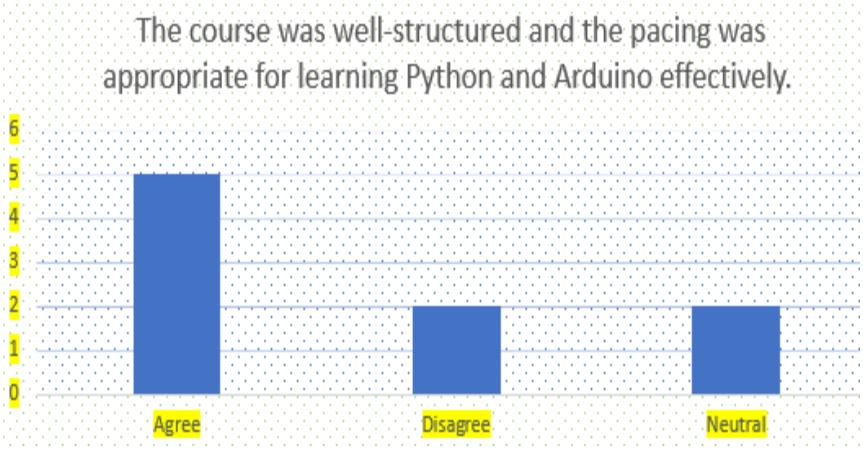

Fig:4 Chart of feedback analysis of structure of the course Appropriate for learning python and Arduino

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

"Add-On course on Python using Arduino 3.0"

Course Report

A five-day Add-On Course on **Python using Arduino 3.0** was organized by the Department of Electronics & Communication Engineering from 23.08.2021 to 27.08.2021 for 3rd year B.E. Electronics & Communication Engineering students in the VLSI Laboratory.
Mr. Skanda Kumar T R, Software Engineer, BOSCH India Pvt Ltd. Bangalore was the resource person. The event was coordinated by Prof. G S Mallikarjuna, HoD, E&CE, Dr. Shalini Prasad, Professor, E&CE, & Prof. Shylaja, Assistant Professor, E&CE.

Day 1: Introduction to Virtualization

The event began with a formal inaugural function. Dr. H N Thippeswamy, Principal , CEC, Dr. Jyothi P, Vice Principal, and Prof. Mallikarjuna G S, HoD , Dept. of E&CE were present during the inauguration. The program began by seeking the blessings of Almighty with invocation and lighting of lamp. Principal advised the students to utilize the benefits of the course completely. **Dr. Shalini Prasad** Welcomed the resource person and gave a course overview. Later the session was handed over to the speaker.

In the morning, participants were welcomed to the course, and an overview of virtualization concepts was presented. Types of virtualizations, including hardware development kit and software were discussed along with their benefits and challenges. The session continued with an exploration of various virtualization platforms like PyCharm. Participants installed Arduinodevelopment tool and created the first sample test codes.

During the afternoon session, advanced virtualization concepts were covered. This included the management of virtual machines, such as starting, stopping, and pausing. Snapshots, cloning, and resource allocation providing participants with an understanding of virtualization best practices.

Day 2: Set up the Firmata protocol on Arduino

The morning session delved further into Firmata protocol, covering topics such as Protocol and storage management within Arduino environments. Participants learned about configuring mapping the constraints settings and managing storage resources effectively.
In the afternoon, participants engaged in hands-on activities related to control and analog and digital inputs and outputs in development environments. They practiced implementing Triggernotifications techniques and explored best practices for optimizing setups.

Day 3: Introduction to Arduino sensors and switches

On the third day, the morning session began with an introduction to digital and analog components. The focus then shifted to Arduino sensors and switches, providing an overview of its services and capabilities. Participants learned how to create an higher-level apps and navigated the portal. The session concluded with an introduction to basic applications for Arduino in Python.
Afternoon, participants delved deeper into Azure, exploring the creation and managementof Virtual Machines. Topics included VM extensions, customization, & understanding ofavailability sets and scaling options. Participants engaged in practical exercises to reinforce their learning.

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Day 4: Develop applications with Arduino and Python

The fourth day started with a continuation of Set up electronic circuits, focusing on advanced topics such as higher-level apps measuring sensors. Participants gained hands-on experience in setting up a electronic circuits using Firmata protocol.

The afternoon session shifted to Firmata protocol capabilities. Participants explored, various storage options Queue, File Storage. A hands-on lab provided practical insights into working with Arduino libraries and Databases

Day 5: Python applications and inbuilt libraries

In the morning, participants deepened their understanding of Python application on Arduino online libraries pre-programed modules. The session also covered data migration to Arduino and best practices in managing project databases.

The afternoon continued with advanced Python topics, focusing on identity and access management, and monitoring/logging in Arduino. Participants explored practical aspects of these concepts through hands-on activities.

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Department of Electronics & Communication Engineering

Certificate of Participation

This is to Certify that

Ms. Apoorva Kulakarni (1CE19EC002)

has Participated in five day Add-on course "**Python using Arduino 3.0**" organized by Department of Electronics and Communication engineering held from 23rd August 2021 to 27th August 2021

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Department of Electronics & Communication Engineering

Certificate of Participation

This is to Certify that

Mr. Vishwas D V (1CE19EC010)

has Participated in five day Add-on course "**Python using Arduino 3.0**" organized by Department of Electronics and Communication engineering held from 23rd August 2021 to 27th August 2021

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