2.3.2 - Teachers use ICT-enabled tools including online resources for effective teaching and learning

At our institution, the integration of ICT-enabled tools and online resources is a key initiative to foster an engaging, interactive, and student-centric learning environment. This approach aligns with contemporary pedagogical practices and the objectives set forth by the National Board of Accreditation (NBA).

A] ICT Integration in Teaching Methodologies

Teachers actively incorporate ICT tools such as projectors, smart boards, and advanced software solutions into their lectures to provide visual and interactive content. These tools help in breaking down complex topics into simpler, more digestible formats through animations, simulations, and graphical representations. For instance, engineering concepts such as circuit designs or fluid dynamics are demonstrated using simulation tools, offering students a virtual hands-on experience that strengthens their conceptual understanding.

B] Use of Online Platforms and Resources

To ensure continuity and flexibility in learning, teachers utilize online platforms such as Learning Management Systems (LMS) and Massive Open Online Courses (MOOCs). Platforms like Moodle, Google Classroom, and Microsoft Teams are extensively employed for sharing lecture materials, conducting quizzes, and providing feedback. Furthermore, subject-specific online resources, including research articles, e-books, and video lectures from platforms like NPTEL, Coursera, and Khan Academy, are integrated into lesson plans to expand the knowledge base of students.
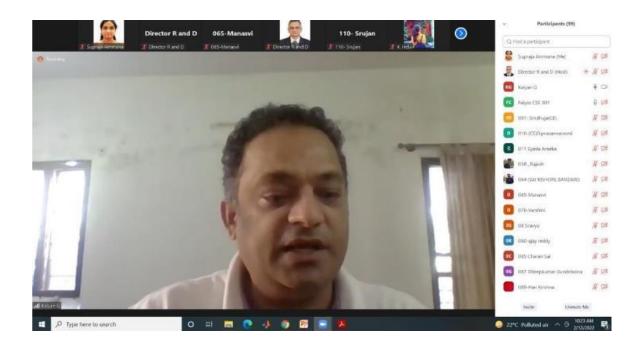
C] Interactive Learning and Assessment

Interactive tools such as Kahoot, Quizizz, and Padlet are used to make learning participatory and dynamic. These tools allow real-time quizzes, brainstorming sessions, and collaborative exercises, encouraging active student involvement. Teachers also leverage digital assessment tools for formative evaluations, ensuring timely feedback and personalized learning strategies.

D] Leveraging Data Analytics for Personalized Learning

Teachers are trained to use data analytics features embedded in LMS platforms to track student progress, identify learning gaps, and tailor teaching strategies accordingly. Insights derived from student performance analytics help in designing targeted remedial measures and adaptive teaching techniques, ensuring that every student achieves their potential.
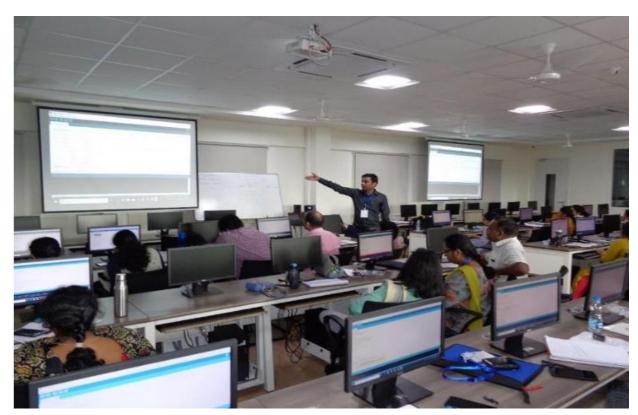
Sample Pictures:

Mega Trends in Aerospace Industry

Satish Thokala
Aerospace Industry Manager, MathWorks

List of Faculties and the different techniques employed to aid teaching

S.No.	Faculty	Topic	Subject	Approach used
1	Dr. K. Vasanth	Consolidated topics of DSP	Digital signal processing	Mind Map
2	Mr.P.Chandrasekar	Multivibrators and allied topics	Linear Digital IC Applications	Project Based Learning
3	Dr.S.Radha	State Machines and Allied topics	Digital system design using Verilog	Never Miss a Class
4	Dr.S.Radha	Theorems	Network Analysis	Never Miss a Class
5	Dr.J.Mounika	Concept of Semiconductors and Rectifiers	Dc Circuits, Sensors and Transducer	Short Presentation
6	Mr.Jagan Mohan Reddy	Designing of digital Circuits and develop HDL codes for designs.	VLSI Design	Think Pair Shar
7	Smt.D.Sony	Concept of Embedded System Design, Design Metrics, Quality Attributes, Challenges.	Embedded Systems	Classroom Discussion
8	Mr.P.Ranjith	Elementary Signals and Classification	Systems for Signal Processing	Mentimeter
9	Dr. Sai Krishna	Fundamentals of signals and systems	Systems and Signal processing	Short Presentation

1	Dr. K. Vasanth	Consolidated topics of DSP	Digital signal processing	Mind Map

Name of The Subject: Digital signal processing

Name of the Innovative teaching methodology employed: Mind Map Activity

Name of the Topic: Consolidation of IIR filters, FIR filters, Sampling, Transform Techniques

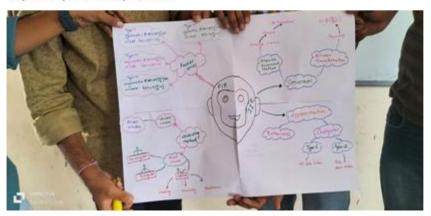**Name of the Faculty: Dr.K.Vasanth**

Step1: Students grouped and given a topic to perform Mindmap

Step 2: Students with Mind map Created on various topics of DSP

Step 3: Sample Mind Map Created

CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

An Autonomous Institute I Affiliated to Osmania University
Kokapet Village, Gandipet Mandal, Hyderabad, Telangana-500075, www.cbit.ac.in

COMMITTED TO RESEARCH, INNOVATION AND EDUCATION

45 years

A Value Added Course (Online) on

PYTHON PROGRAMMING FOR BEGINNERS

Organized by

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

INTENDED AUDIENCE: All Beginners
PRE-REQUISITES: School level Mathematics
INDUSTRIES APPLICABLE TO:
This course should be of value to any company requiring programming skills.

Last date for Registration: 18-09-2023
Course Duration: 16 weeks
Course Start Date: 11-09-2023
Course End Date: 30-12-2023
Exam Date: 21-01-2024

COURSE OUTLINE:

This dynamic course delves into essential Python concepts, such as Object-Oriented and Functional Programming, File and Exception Handling, Modules, Regular Expressions, GUI and Web Programming, Database Interaction, and Python Open Source Libraries for Data Science/Machine Learning. By mastering these concepts, learners gain the expertise needed to effectively address real-world challenges using Python's versatile features.

COURSE INSTRUCTORS:

Prof. R. Madana Mohana
Prof. K. Radhika
Dr. Kadiyala Ramana
Dr. Pulipati Srilatha
Dr. N. Satyanarayana
Dr. P. Samson Anosh Babu
Smt. T. Satya Kiranmai
Smt. V. Krishna Aravinda
Smt. S. Shobarani
Mrs. Sheena Mohammed
Mrs. Swathi Tejah Yalla
Mrs. Kaneez Fatima

Course status: ON GOING
Registration link:
https://forms.gle/btMPyjgEFhKxJqbh7

Certification Criteria: Contribution (%)
Internal Assessment: 20%
Online Discussion Forum: 30%
End-Assessment: 50%

COURSE LAYOUT:

Week 01:
Module-1: Introduction to Python
Module-2: Installing Python & Writing First Python Programming
Week 02:
Module-3: Data types in Python
Module-4: Operators in Python
Week 03:
Module-5: Input and Output
Week 04:
Module-6: Control Statements
Week 05:
Module-7: Strings and Characters
Module-8: Functions
Week 06:
Module-9: Lists and Tuples
Module-10: Dictionaries
Week 07:
Module-11: Object Oriented Programming Concepts (OOPs)

Week 08:
Module-12: Functional Programming
Week 09:
Module-13: Files
Week 10:
Module-14: Exceptions
Week 11:
Module-15: Modules and packages
Week 12:
Module-16: Regular Expressions
Week 13:
Module-17: GUI Programming
Week 14:
Module-18: Web Programming
Week 15:
Module-19: Database Programming
Week 16:
Module-20: Python Open Source Libraries for Data Science/Machine Learning

3	Dr.S.Radha	State Machines and Allied topics	Digital system design using Verilog	Never Miss a Class

Name of The Subject: Network Analysis

Name of the Innovative teaching methodology employed: Never Miss a Class

Name of the Topic: Theorems and Allied topics

Name of the Faculty: Dr. S. Radha

E-Content: Prepared 12 videos on NA & S subject (ECE) and hosted in Youtube

Sl. no.	Title of the E-Content module	Hosted on (web link)
1	Superposition theorem PSIM software- simulation- Network analysis	https://youtu.be/LLG8D5KTQwk
2	Superposition theorem Matlab Simulink-simulation- Network analysis	https://youtu.be/g01aVtLMaIg
3	Superposition theorem - Falstad online simulator	https://youtu.be/b79YRgNLyjg
4	Superposition theorem- Circuit Lab online simulator	https://youtu.be/fIMA_TE3gMo
5	Network Analysis topics in virtual labs	https://youtu.be/ppmDd9g14Zs
6	RL circuit PSIM software - simulation	https://youtu.be/FJtARyUCC2I
7	RL circuit Matlab Simulink - simulation	https://youtu.be/830mTQtztn0
8	Thevenin theorem problems	https://youtu.be/t_MWkhDw5xU https://youtu.be/dc7FCam1nnc https://youtu.be/r0oaK9JKDJk
9.	I and V in series and parallel circuits	https://youtu.be/w_0WH59ZC4A
10	Network analysis basics	https://youtu.be/eCvwpOqrJSs

Screenshot of Hosted Videos