

Comprehensive Report on Certificate Course for Vishnu Dental Students
INTRODUCTION TO PROGRAMMING AND DATA VISUALIZATION TOOLS

24th March 2025 to 30th April 2025

The Department of Data Science, BCA, and MCA at B V Raju College cordially organized a certificate course titled "**Introduction to Programming and Data Visualization Tools**" for the students of Vishnu Dental College. This initiative aimed to bridge programming and data visualization skills with practical applications in interdisciplinary domains.

Inauguration Ceremony

The certificate course was inaugurated on 24th March 2025 by **Dr. I R Krishnam Raju**, Principal of B V Raju College. In his inaugural address, Dr. I R Krishnam Raju emphasized the importance of programming and data visualization skills in today's interdisciplinary domains.



He highlighted how these skills could benefit students of Vishnu Dental College in research, analytics, and clinical decision-making. He encouraged participants to actively engage and leverage the knowledge shared by expert faculty.

Course Objectives

- Introduce students to fundamental programming concepts and their practical applications.
- Develop logical thinking and problem-solving skills using RAPTOR.
- Familiarize participants with Python programming basics for scripting and automation.
- Enable effective data visualization using Tableau.
- Provide foundational knowledge of database management and SQL operations.

3. Topics and Tutors

a. Introduction to RAPTOR

Tutors: Mr. Naresh Bhimavarapu (HOD-Data Science)& Mr. M N Ravindra Babu (HOD-BCA)

This module focused on algorithm design and logical reasoning using RAPTOR, a visual programming tool. Participants explored structured programming concepts through flowcharts, making it easier to conceptualize and debug algorithms effectively.

b. Basics of Python Programming

Tutor: Mrs. K Rajeswari (Assistant Professor, Department of MCA)

The Python programming sessions emphasized the importance of Python as a versatile language in computational tasks. Students learned fundamental concepts such as data types, control structures, functions, and libraries. Special attention was given to practical applications like file handling and basic data analysis to demonstrate real-world relevance.

c. Data Visualization using Tableau

Tutor: Mr. Naresh Bhimavarapu (HOD, Data Science)

Participants were introduced to Tableau's capabilities in transforming raw data into interactive visualizations. The sessions covered data preparation, chart creation, and dashboard



design. Emphasis was placed on using filters, calculated fields, and storytelling techniques to derive actionable insights from data.

d. Database Management and SQL Fundamentals

Tutor: M N Ravindra (HOD, BCA)



The DBMS and SQL module provided a comprehensive understanding of database systems, starting from fundamental concepts like schema design and normalization to advanced SQL queries. Students gained practical experience in data retrieval, manipulation, and security controls, using industry-standard tools to reinforce theoretical knowledge.

Course Summary

Students from Vishnu Dental College attended, gaining practical skills and interdisciplinary insights. The course included practical sessions, case studies, and collaborative exercises. Photos and activities were geo-mapped to provide a unique blend of academic and geographical relevance.

Certificate and Recognition:

Upon successful completion of the course, certificates were awarded based on participants' performance in the Google Quiz assessment, providing a tangible acknowledgment of their proficiency in Python, SQL, and Tableau.

This recognition serves as a testament to their dedication and proficiency in the covered topics, enhancing their credentials for future academic pursuits.





The certificate course successfully bridged the gap between programming and application in specialized fields like dentistry. With expert guidance from the faculty, participants were empowered to explore computational tools and data visualization techniques. The collaborative effort of the departments involved ensures that this initiative will set a precedent for future interdisciplinary endeavors.

