



बिरसा मुंडा ट्रायबल युनिवर्सिटी Birsa Munda Tribal University

राजपिपला, जि० नर्मदा Rajpipla, Dist. Narmda

Established by Tribal Development Department, Govt. of Gujarat

School of Computer Science

P.G.D.C.A. (Post Graduate Diploma in Computer Applications) Programme

Subject Code & Name: PGDCA205-1 - ICT Tools for Survey and Data Analysis

Teaching And Evaluation Scheme:

Teaching Scheme				Examination Scheme			
Credits				Component Weightage			
				CCE		SEE	
L	T	P	Total	TH	PWE	TH	PWE
4	-	-	4	50%	-	50%	-

Programme Name	P.G.D.C.A.
Semester	2
Course Code	PGDCA205-1
Course Title	ICT Tools for Survey and Data Analysis
Course Content Type (Th. / Pr.)	Th.
Course Credit	4
Sessions + Lab Per Week	4
Total Teaching/ Lab Hours	60
* 2 Lab = 1 session	

Learning Objectives

Upon successful completion of this course, students will be able to:

- Understand the role of ICT tools in digital surveys, online data collection methods, questionnaire design, and ethical practices in data collection.
- Learn data collection, organization, cleaning, preprocessing, and spreadsheet-based data management techniques.



- Understand basic data analysis techniques, descriptive statistics, visualization methods, and dashboard tools for interpreting data.
- Learn report preparation, presentation techniques, data sharing methods, and ethical practices in reporting survey data.

Learning Outcomes

After successful completion of the course, students will be able to:

- Create and manage online survey forms using digital tools such as Google Forms, SurveyMonkey, and Microsoft Forms.
- Collect, organize, clean, and manage survey data using Google Sheets and spreadsheet tools with appropriate data handling methods.
- Analyse datasets and generate meaningful insights using statistical methods, pivot tables, charts, graphs, and Power BI tools.
- Prepare professional reports and presentations using survey data while maintaining confidentiality and ethical use of information.

CLO–PLO Mapping Matrix:

CLOs/PLOs	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
CLO1	2	2	2	3	3	3
CLO2	2	2	3	3	3	2
CLO3	3	2	3	3	3	2
CLO4	2	1	2	3	3	3

Detailed Contents

Unit	Topic/Sub Topic	Teaching Hours
I Introduction to ICT and Survey Tools	Introduction to ICT and Survey Tools • Introduction to ICT • Role of ICT in data collection • Introduction to digital surveys • Types of surveys (online/offline) • Overview of Survey Tools : Google Forms , SurveyMonkey, Microsoft Forms • Creating forms and questionnaires • Question types (MCQ, checkbox, short answer, etc.) • Form settings and sharing options • Basics of Privacy and Data collection ethics	15
II Data Collection	Data Collection and Management • How to do collection of Response in Google Forms • Linking forms with Google Sheets • Data organization and structuring	15

and Management	• Data cleaning techniques • Handling missing data • Removing duplicates • Trim whitespace • Excel for data handling • Sorting and filtering data • Basic formulas (SUM, AVERAGE, COUNT, IF, SUMIF)	
III Data Analysis and Visualization	Data Analysis and Visualization • Introduction to data analysis • Descriptive statistics (mean, median, mode) • Pivot tables • Charts and graphs (bar, pie, line) • Overview of Power BI • Interpreting data and generating insights	15
IV Reporting of Data	Reporting of Data • Report writing using survey data • Creating summary reports • Exporting and sharing reports • Presentation of Report using PowerPoint • Ethical use of data and confidentiality	15
Reference Books		
15. Hai-Jew, S. (Ed.). (2019). <i>Online survey design and data analytics: Emerging research and opportunities</i> . IGI Global. 16. Guerrero, H., Guerrero, R., & Rauscher. (2019). <i>Excel data analysis</i> . Springer International Publishing. 17. Lambert, J., Frye, C., Haselier, R. G., Lambert, J., Frye, C., & Haselier, R. G. (2016). <i>Microsoft Office 2016</i> . dpunkt.		
Web Resources		
1. https://www.geeksforgeeks.org/websites-apps/how-to-create-google-form-complete-guide/ 2. https://help.surveymonkey.com/en/surveymonkey/create/creating-a-survey/ 3. https://forms.office.com/		

L:: Lecture, **T::** Tutorial, **P::** Practical

CCE:: Continuous & Comprehensive Evaluation

(CCE theory includes Mid Semester Examination, Assignment, MCQ Quizzes, Seminar, Reflective Notes, Class Participation, Case Analysis and Presentation, Slip Tests (Announced/ Surprised), Attendance etc. or any combination of these)

PWE: Practical Work Examination

(PWE includes Laboratory Practical Work, Project Work, Viva simulation exercise work etc.)

SEE:: Semester End Evaluation