Government Degree College (Autonomous), Baramulla

Semester: 8th **Major**

Mass Communication and Multimedia Production

Topic: Data Journalism **Course Code MCMC1822M**
Credits: **6 (4 Theory + 2 Lab)** **Contact Hours (64 Hours + 64 Hours)**

Course Objectives

1. To introduce students to the foundations and evolution of data journalism.
2. To build essential skills for collecting, cleaning, and analyzing data.
3. To train students in using visualization and storytelling techniques for data-driven reporting.
4. To sensitize students to ethical and legal considerations in handling data.

Learning Outcomes

By the end of the course, students will be able to:

1. Explain the role of data journalism in transparency, accountability, and storytelling.
2. Apply spreadsheet and basic analytical skills to identify patterns and story angles in datasets.
3. Create clear and engaging data visualizations using accessible tools.
4. Develop and present an original data-driven story that demonstrates accuracy, clarity, and ethical use of data.

Part 1: Theory (4 credits)

Unit I: Foundations of Data Journalism

- What is Data Journalism? Concepts and Evolution
- Role in Transparency, Accountability, and Storytelling
- Where and How to Find Data: Open Data, Government Portals, APIs
- Ethical and Legal Aspects: FOIA, CPRA, Data Privacy, Bias
- Precision Journalism and Computer-Assisted Reporting (CAR)

Unit II: Working with Data

- Basics of Spreadsheets: Rows, Columns, Cells, Sorting, Filtering
- Numeracy for Journalists: Percentages, Averages, Medians, Ranks
- Intermediate Spreadsheet Skills: Pivot Tables, Histograms, Distributions
- Cleaning and Preparing Data: File Formats, PDFs, Common Errors
- "Interviewing" the Data: Patterns, Anomalies, Story Angles

Unit III: Storytelling and Visualization

- Structuring Data Stories: Angles, Framing, and Humanizing Numbers
- Visualizing Data: Charts, Graphs, Maps (Bar, Line, Scatter, Choropleth)

- Tools for Visualization: Google Sheets, Datawrapper, Infogram, Carto
- Writing with Data: Narrative Techniques and the Inverted Pyramid
- Case Studies in Investigative and Explanatory Data Journalism

Unit IV: Advanced Tools and Applications

- Data Journalism for Digital and Social Media Platforms
- Artificial Intelligence and Automation in Data Journalism
- Fact-checking and Verifying Numbers from Public Sources
- Trends and Future of Data Journalism
- Exploring Beyond Basics: Introduction to R, Python, and Advanced Visualization Tools

Part 2: Practicals (2 credits)

1. **Data Story Analysis**: Select and critically evaluate a published data journalism story. Identify the data source, structure, narrative, and visualization used. Present findings in class.
2. **Final Project**: Develop an original data-driven news story using a publicly available dataset. Include data cleaning, analysis, and visualization elements. Submit the story and present it in class for review and feedback.