KAUTILYA SCHOOL OF PUBLIC POLICY

GITAM (Deemed to be University)
Rudraram, Patancheru Mandal
Hyderabad, Telangana 502329

Course Code: PPOL1011	**Course Title**: Data for Public Policy	
Semester: 2	**Course Type**: Minor	**Credits**: 3
Home Program(s): MPP	**Batch/Academic Year**: 2024-2025	
Course Lead: Mr. Rakesh Dubbudu	**Assigned T/RA:**	

Course Description

The course introduces undergraduate students to the importance of Data for Public Policy. It equips students with the foundational skills and knowledge needed to understand the structure of the state, and policy formulation, and harness data in developing, analysing, and evaluating public policy. Students will explore key data concepts, methods of cleaning & standardization, analysis tools, and the use of data in decision-making processes. The course will cover topics such as the structure of the state, various public data sources, sourcing, cleaning, standardizing data, data analysis, and data visualization, among others. Through case studies and hands-on exercises, students will learn to interpret and leverage data to inform evidence-based policymaking, assess policy outcomes, and address complex societal challenges.

Course Objectives

The focus of the course will be:

1. To learn the structure of the state & policy making process
2. To learn accessing, understanding, and using public data sources.
3. To learn and practice working with different types of data sources.
4. To apply different stages of working with data to real life data sets.
5. To use relevant basic and advanced software to compile, clean, and standardize data.
6. To transition from using numbers to using maps, graphs, infographics, etc.
7. To identify misleading data and charts and apply how not to present data.
8. To understand the linkages between data & policy

Course Outcomes

On successful completion of this course, students will:

1. Understand the structure of the state and the public policy-making process.

2. Identify and source reliable public data relevant to policy.
3. Clean and standardize data for policy analysis.
4. Apply data analysis tools to evaluate policy effectiveness.
5. Identify misleading data and charts
6. Develop data visualizations that support policy decisions.
7. Engage in critical thinking and communication of policy issues using data.
8. Translate data-driven insights into recommendations for public policy.

Textbooks and Course Materials

1. Government of India (1961). *Allocation of Business Rules* https://cabsec.gov.in/writereaddata/allocationbusinessrule/completeaobrules/english/1_Upload_3540.pdf
2. Cairo, A. (2020). *How charts lie: Getting smarter about visual information*. W. W. Norton & Company.
3. Kirk, A. (2019). *Data visualisation: A handbook for data driven design*. SAGE Publications.
4. Knaflic, C. N. (2015). *Storytelling with data: A data visualization guide for business professionals*. John Wiley & Sons.
5. Ranganathan, K. (2023). *Impactful Data Visualization: Hide and Seek with Graphs*. Penguin Business.
6. Wong, D. M. (2014). *The Wall Street journal guide to information graphics: The do's and don'ts of presenting data facts and figures*. W. W. Norton & Company.
7. Azim Premji University - Understanding Post-Covid-19 Governance Challenges in India
8. Towards Evidence-Based Policymaking: India's Open-Data Initiatives
9. NITI Aayog - Leveraging State Data Ecosystems for State and District Level Policy and Planning

Additional reading materials, handouts, and slides will be shared on the learning management system.

Course Schedule

Unit I	Sessions:	Introduction to State, Public Policy & Role of Data
- Overview of Public Policy and Data's Role - Key concepts in public policy, why data matters. - Structure of the State and Governance - Government structures, the role of institutions, key stakeholders. - Policy Formulation Process - Stages of policy development, from agenda-setting to policy evaluation. - Introduction to Public Data Sources - Overview of public datasets, importance of transparency, and data-driven governance.		

	● Case Study: Data and Policy Decision Making - A real-world example where data influenced public policy	
Unit II	Sessions:	Sourcing and Cleaning Data
	● Introduction to various databases - Government sources, international organizations, open data platforms. ● Understanding different data types in government data ● Quantitative vs. Qualitative data, official statistics, big data, surveys. ● Sourcing Reliable Data- ● Data Bias - Addressing biases in datasets, context, definitions ● Data Cleaning: Why It's Important and How to Do It ● Hands-on session with basic data cleaning techniques (e.g., missing data, inconsistencies).	
Unit III	Sessions:	Data Standardization & Management
	● Standardizing Data - Importance of standards in data (e.g., units, formats). ● Data Harmonization Across Datasets - How to combine multiple datasets, resolving conflicts in data, normalization ● Data Storage and Management - Best practices in storing datasets	
Unit IV	Sessions:	Data Analysis for Public Policy
	● Introduction to Data Analysis Tools - Tools such as Excel, Power Query, and AI tools for analysis ● Descriptive Analysis Techniques - Hands-on session on descriptive statistics to summarize data. ● Inferential Statistics for Policy Making - How to draw conclusions about larger populations from sample data. ● Case Study- A real-world example	
Unit V	Sessions:	Data Visualization for Policy Making
	● Introduction to Data Visualization - Importance of visualization in policy communication. ● Creating Effective Visualizations - Hands-on session using tools like Flourish, Tableau or Excel for visualization.	
Unit VI	Sessions:	Case Studies & Project work
	● Case Studies - Health, Education, Welfare Schemes, etc. ● Group Discussion: Current Data Policy Challenges in India ● Key challenges with data infrastructure and policymaking in India. ● Project Presentations - Students present data-driven policy proposals based on their learnings.	