

Semester VIII  
Discipline Specific Elective- DSE I- 8.1  
Tourism Analytics

Offered by Department of Tourism

Credit Distribution, Eligibility and Pre-Requisite of the Course

Course Title and Code	Course Code	No. of credits	Components of the course			Eligibility Criteria	Pre-requisites of the course
			Lecture	Tutorial	Practical		
Tourism Analytics DSE- 8.1	DSE 8.1	4	3	1	0	Pass in Class XII	NIL

Learning Objectives:

This course aims to introduce students to the fundamentals of analytics and highlight its growing significance in the tourism industry. It is designed to equip learners with essential data analysis tools and techniques that are vital for conducting effective tourism research and making informed decisions. Through a combination of theoretical understanding and hands-on practice, students will develop practical skills in using industry-relevant software for analyzing and visualizing tourism data. By working with real-world datasets and case studies, the course also promotes evidence-based decision-making, enabling students to derive meaningful insights that can inform tourism planning, marketing, and management strategies.

Learning Outcomes:

After completing this course, the learners would be able to:

1. understand key concepts of tourism analytics and their applications.
2. identify and collect relevant tourism data for analysis.
3. apply statistical and analytical techniques to interpret tourism trends and patterns.
4. use data visualization and business intelligence tools to present tourism data effectively.
5. develop data-driven solutions and recommendations for tourism management and marketing.

### **Unit I:- Introduction to Tourism Analytics (12Hours)**

Definition and scope of tourism analytics, Types of tourism data: visitor statistics, accommodation, transport and expenditure, Importance of data in tourism decision-making, Sources of tourism data: primary vs secondary; national tourism organizations, WTTC, UNWTO.

### **Unit II:- Descriptive and Diagnostic Analytics in Tourism (12Hours)**

Key performance indicators (KPIs) in tourism analytics, Overview of analytics tools (Excel, SPSS), Introduction to descriptive statistics: mean, median, mode, standard deviation, Diagnostic analysis: correlation and regression in tourism context, Case study: Understanding seasonality and visitor patterns.

### **Unit III:- Predictive and Prescriptive Analytics in Tourism (11Hours)**

Introduction to predictive analytics and forecasting models, Demand forecasting using historical data, Prescriptive analytics: optimization and simulation models for tourism planning, Ethical issues and data privacy in tourism analytics.

### **Unit IV:- Data Visualization and Reporting in Tourism (10Hours)**

Principles of effective data visualization, Tools for tourism data visualization: Tableau, Power BI, Creating tourism dashboards and reports, Communicating findings to stakeholders.

### **Exercises:**

The learners are required to:

1. collect and classify tourism data from secondary sources (e.g., Ministry of Tourism, UNWTO)
2. create dashboards using Excel to visualize tourism KPIs.
3. visualize customer review sentiment using word clouds and bar graphs.

4. prepare group project: Present a big data solution for a tourism/hospitality business challenge.

### **Suggested Readings:**

- Chen, M., Mao, S., & Liu, Y. (2014). Big data: A survey. *Mobile Networks and Applications*, 19(2), 171-209. <https://doi.org/10.1007/s11036-013-0489-0>
- Gandomi, A., & Haider, M. (2015). Beyond the hype: Big data concepts, methods, and analytics. *International Journal of Information Management*, 35(2), 137-144. <https://doi.org/10.1016/j.ijinfomgt.2014.10.007>
- Hair, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2021). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (3rd ed.). Sage Publications.
- Provost, F., & Fawcett, T. (2013). *Data Science for Business: What You Need to Know about Data Mining and Data-Analytic Thinking*. O'Reilly Media.
- Russell, M. A. (2018). *Mining the Social Web: Data Mining Facebook, Twitter, LinkedIn, Instagram, GitHub, and More* (3rd ed.). O'Reilly Media.
- Tableau Software. (n.d.). Resources & Training. <https://www.tableau.com/learn>
- World Tourism Organization (UNWTO). (2023). *Tourism Data Dashboard*. <https://www.unwto.org/unwto-tourism-dashboard>
- Xiang, Z., Du, Q., Ma, Y., & Fan, W. (2017). A comparative analysis of major online review platforms: Implications for social media analytics in hospitality and tourism. *Tourism Management*, 58, 51-65. <https://doi.org/10.1016/j.tourman.2016.10.001>

### **Notes:**

1. **Suggested Readings will be updated and uploaded on college website from time to time.**
2. **Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**