Faculty of Hospitality & Tourism
Diploma in Hotel and Tourism Management (DHTM)
(W. E. F.: 2023-24)

Document ID: SUTEFHTD-01

Name of Faculty	:	Faculty of Hospitality & Tourism
Name of Program	:	Diploma in Hotel & Tourism Management (DHTM)
Course Code	:	2DHT03
Course Title	:	Business Mathematics
Type of Course	:	Skill Enhancement (SE)
Year of Introduction	:	2023-24

Prerequisite	:	Basic Knowledge of BODMAS
Course Objective	:	The course aims to equip students with the essential knowledge of business mathematics for hospitality management. It focuses on developing their mathematical skills, financial calculations, data analysis, pricing strategies, and operational decision-making in hotel, restaurant, and resort operations.
Course Outcomes	:	At the end of this course, students will be able to:
	CO1	Apply basic arithmetic operations to solve mathematical problems related to hotel, restaurant, and resort operations.
	CO2	Analyse and evaluate financial data using concepts such as simple interest, compound interest, present value, and future value to make informed financial decisions in the hospitality industry.
	CO3	Interpret and analyse data using measures of central tendency, measures of dispersion, and probability concepts to support decision-making processes in the hospitality sector.
	CO4	Apply mathematical techniques such as markup, markdown, and break-even analysis to optimize pricing strategies, manage costs, and maximize profitability in hotel, restaurant, and resort operations.
	CO5	Utilize mathematical models and techniques to optimize workforce management, inventory control, revenue management, and performance measurement in the context of hospitality operations.

Teaching and Examination Scheme

Teaching Scheme (Contact Hours)			Credits	Examination Marks				
				Theory Marks		Practical Marks		Total Marks
L	T	P	C	SEE	CIA	SEE	CIA	
3	0	0	3	70	30	0	0	100

Legends: ***L****-Lecture;* ***T****–Tutorial/Teacher Guided Theory Practice;* ***P****–Practical,****C*** *– Credit,* ***SEE*** *– Semester End Examination,* ***CIA*** *- Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)*

Course Content

Unit No.	Topics	Teaching Hours	Weightage	Mapping with COs
1	**Fundamentals of Business Mathematics** Chapter 1. Introduction to Business Mathematics Chapter 2. Fractions and Decimals Chapter 3. Percentages and their Applications Chapter 4. Ratios and Proportions	10	22%	CO1
2	**Financial Mathematics** Chapter 1. Basic Financial Concepts Chapter 2. Simple Interest Chapter 3. Compound Interest Chapter 4. Present Value and Future Value	10	22%	CO2
3	**Statistics and Data Analysis** Chapter 1. Data Collection and Presentation Chapter 2. Measures of Central Tendency Chapter 3. Measures of Dispersion Chapter 4. Probability	10	22%	CO3
4	**Mathematics in Pricing and Cost Control** Chapter 1. Markup and Markdown Chapter 2. Food and Beverage Cost Control Chapter 3. Break-Even Analysis	10	22%	CO4
5	**Mathematics in Operations Management** Chapter 1. Workforce Management Chapter 2. Inventory Management Chapter 3. Revenue Management Chapter 4. Performance Metrics	5	12%	CO5

Suggested Distribution of Theory Marks Using Bloom's Taxonomy						
Level	Remembrance	Understanding	Application	Analyse	Evaluate	Create
Weightage	**20**	**35**	**20**	**10**	**10**	**5**

NOTE: This specification table shall be treated as a general guideline for the students and the teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Suggested List of Experiments/Tutorials/Exercises

Sr. No.	Name of Experiment/Tutorial	Teaching Hours
1	Convert fractions to decimals and vice versa	1
2	Solve word problems involving fractions and decimals	1
3	Solve real-world problems related to pricing, discounts, and sales using percentages	1
4	Calculate simple interest for different scenarios	1
5	Determine compound interest with various compounding periods	2
6	Analyse sample datasets and interpret the results	2
7	Interpret the measures of central tendency in the context of customer satisfaction	2
8	Apply probability to scenarios such as forecasting demand and managing risk	2
9	Analyse pricing strategies and promotions using markup and markdown	1
10	Evaluate the impact of occupancy on revenue, and profitability	2

Suggested Learning Websites

Sr. No.	Name of Website
1	https://www.khanacademy.org/
2	https://www.mathway.com/
3	https://www.hftp.org/

Reference Books

Sr. No.	Name of Reference Books
1	"Business Mathematics" by Gary Clendenen and Stanley A. Salzman (Pearson Education)
2	"Essentials of Business Mathematics" by Joseph Brechner and E. George Kloss (Prentice Hall)
3	"Business Mathematics" by David R. Anderson, Dennis J. Sweeney, and Thomas A. Williams (South-Western College Publishing)
4	"Business Mathematics" by N.P. Bali and P. Nagrajan (Laxmi Publications)
5	"Mathematics for Business, Science, and Technology" by Steven T. Karris (Orchard Publications)
6	"Business Mathematics" by J.K. Singh (S. Chand & Company Ltd.)