

FOUR YEAR UNDERGRADUATE PROGRAM(2024-28)
Department of Commerce and Management

COURSE CURRICULUM

PART-A: Introduction			
Program: Bachelor in Business Administration (Certificate / Diploma / Degree/Honors)		Semester-V	Session: 2024-2027
1	Course Code	BBSC- 15	
2	Course Title	Quantitative Techniques	
	Course Type	Discipline Specific Course (DSC)	
4	Pre-requisite(if,any)	As per requirement	
5	Course Learning Outcomes(CLO)	<ul style="list-style-type: none"> ➤ Get an insight into the fundamentals of Operations Research and its definition, characteristics and phases. ➤ Learn the usage of game theory and Simulation for Solving Business Problems. ➤ Solve Optimization Problems like transportation and to Identify and formulate Linear Programming Models. 	
6	Credit Value	4 Credits	Credit=15 Hours-learning & Observation
7	Total Marks	Max. Marks: 100	Min Passing Marks: 40
PART-B: Content of the Course			
Total No. of Teaching-learning Periods (01 Hr. per period) – 60 Periods (60 Hours)			
Unit	Topics (Course contents)		No. of Period
I	Quantitative Technique: Definition, Approach to decision making, Analysis and Computer Based Information System. Operation Research: Introduction to OR; Scope, Techniques, Characteristics and Limitations of Operation Research; Methodology and Models in OR (only theory).		15
II	Linear Programming: Formulation of Problem, Methods of solving Linear Programming; Problems related to mixed constraints. Transportation Model: Mathematical Formulation, Initial Basic Feasible Solution: North West Corner Method, Least Cost Method and Vogel's Approximation Method; Optimization (Minimization and Maximization) using Modified Distribution Method.		15
III	Probability: Meaning and definition of Probability (Addition Rule, Multiplication Rule, Baye's Theorem, Poisson distribution, Binomial distribution).		15
IV	Sampling and Sampling Distribution: (T-test, Z-test, f-test, Chi-square test). Theory of games- Two person zero sum game; Solution to games: Saddle point, dominance rule, Value of the game, mixed strategy, Graphical method of solving a game – (2 x n) and (m x 2) games.		15
Keywords	Quantitative Techniques, Operation Research, Sampling, Probability.		
PART-C: Learning Resources			
Text Books, Reference Books and Others			
1. <i>Natrajan A. M. 'Operation Research', Pearson Education</i> 2. <i>Vohra N. D. 'Quantitative Techniques in Management', Tata McGraw Hill.</i> 3. <i>Dougerty, Introduction to Econometrics, 4E, ISBN: 9780195693249, Oxford University Press</i> 4. <i>Taha H, "Operation Research", Pearson Education</i> 5. <i>P. K. Gupta and D. S. Hira, "Operations Research", New Delhi: Sultan Chand Publications,</i> 6. <i>Hillier and Lieberman 'Operations Research', Tata McGraw Hill, Eighth Edition</i>			
Online Resources–			
https://www.kopykitab.com/ https://www.hitbullseye.com/grad-			

Dr. Anand

Sal. De. M.

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PART-D:AssessmentandEvaluation		
Suggested Continuous Evaluation Methods:		
Maximum Marks:	100Marks	
ContinuousInternalAssessment(CIA):	30Marks	
EndSemesterExam(ESE):	70 Marks	
ContinuousInternal Assessment (CIA): (ByCourseTeacher)	InternalTest/Quiz-(2): 20&20 Assignment/Seminar- 10 TotalMarks- 30	Bettermarks outofthetwoTest/ Quiz +obtainedmarksinAssignmentshallbe considered against 30 Marks
EndSemester Exam (ESE):	Twosection- A & B SectionA:Q1.Objective-10x1=10Mark;Q2.Short answertype-5x4=20Marks SectionB:Descriptiveanswertypeqts.,1outof2fromeachunit-4x10=40Marks	

Name and Signature of Convenor & Members: (CBOS)

