COURSE TITLE	**STRUCTURAL EQUATION MODELLING**
COURSE CODE	**04BM0204**
COURSE CREDITS	**3**

Course Outcomes: After completion of this course, student will be able to:

1. Identify the core principles of SEM, focusing on model specification, estimation techniques, and evaluating model fit for effective application in research.
2. Apply path analysis and test both mediating and moderating hypotheses within the SEM framework.
3. Analyze and gain hands-on experience in specifying, estimating, and testing a simple SEM model, and synthesize the results into a structured research paper format.
4. Evaluate the foundational concepts of SEM, enabling students to confidently engage with more advanced topics in future coursework or research.
5. Critique and address challenges in SEM modeling through real-world case studies and applications, promoting problem-solving skills.

Pre-requisite of course:NA

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
3	0	0	0	30	20	50	0

Contents : Unit	Topics	Contact Hours
1	**Introduction to Structural Equation Modeling (SEM)** Concept of SEM, Principles of SEM, Difference between Covariance-based SEM and PLS-SEM, Type of Constructs: Reflective and Formative, Confirmatory Factor Analysis (Formative construct, reflective constructs), Model fit indices.	8
2	**Measurement Model Assessment** Reliability and Validity, Latent variables, Higher Order Confirmatory Factor Analysis (Confirmatory Tetrad Analysis), Path Analysis - Direct and Indirect Effects.	8
3	**Mediation Analysis** Concept of mediation analysis, Sequential Mediation Analysis and Parallel Mediation Analysis, Results interpretation.	8
4	**Moderation Analysis** Concept of moderation analysis, Interaction Effect and Multi-Group Analysis, Moderated-mediation Analysis, Mediated-moderation Analysis. Results interpretation.	12

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Contents : Unit	Topics	Contact Hours
5	**Advanced Analysis of Complex Models** Use of SEM in Different Domains of Management, Importance-Performance Map Analysis (IPMA), PLS predict/CVPAT, Finite Mixture Partial Least Squares (FIMIX) Segmentation.	9
Total Hours		**45**

Textbook :

1 Structural Equation Modeling , Byrne, B. M. , Routledge, 2022

2 Principles and Practice of Structural Equation Modeling, Kline, R, Guilford Press, 2023

References:

1 A Primer on Partial Least Squares Structural Equation Modeling, A Primer on Partial Least Squares Structural Equation Modeling, Joseph H. Hair Jr., G. Tomas M. Hult, Christian Ringle, and Marko Sarstedt, SAGE, 2022

2 Structural Equation Modeling, Structural Equation Modeling, Bowen, N. K., & Guo, S., Oxford University Press, 2021

Suggested Theory Distribution:

The suggested theory distribution as per Bloom's taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery and evaluation					
Remember / Knowledge	**Understand**	**Apply**	**Analyze**	**Evaluate**	**Higher order Thinking / Creative**
0.00	0.00	25.00	25.00	25.00	25.00

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