COURSE TITLE	**CRITICAL AND LOGICAL THINKING**
COURSE CODE	**04BB0313**
COURSE CREDITS	**2**

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

1. Apply critical thinking techniques to evaluate arguments and distinguish between valid and fallacious reasoning.
2. Analyze decision-making models and employ creative thinking strategies to enhance corporate problem-solving.
3. Classify and interpret analogy, classification, and series completion patterns in logical reasoning contexts.
4. Solve complex logical puzzles using binary logic, Venn diagrams, and syllogism principles effectively.
5. Evaluate logical fallacies and demonstrate critical thinking skills in academic, professional, and personal scenarios.

Pre-requisite of course: None

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
2	0	0	50	30	20	0	0

Contents : Unit	Topics	Contact Hours
1	**Introduction to Critical Thinking & Evaluating Arguments** What is Critical Thinking?, Intellectual Standards to Critical Thinking, Benefits of Critical Thinking., Barrier to Critical Thinking, Characteristics of critical thinkers, Arguments and Non arguments, Inductive and Deductive Arguments, Refuting Arguments, Premises and Conclusions	7
2	**Creative thinking for corporate decision making** A model for good decision-making, Decision procedures and making the right decisions, Common flaws in our thinking about decisions, Six Thinking Hat approach, Lateral Thinking	5
3	**Analogy, Classification & Series Completion** Simple and Double Analogy, Number and Alphabet Analogy, Completing and Choosing the Analogous Pair, Choosing the Odd Word, Choosing the Odd Numeral and Letter Pair/Group, Number and Letter Series, Pattern Series	7

MR. PARAS CHANDULAL RUGHANI
Digitally signed by (Name of HOD)

DR. SANJEET SINGH
Digitally signed by (Name of Dean/ Principal)

Contents : Unit	Topics	Contact Hours
4	**Logical Puzzles** Fun Logic Puzzles, Cryptarithms, Binary Logic - Connectives and Binary Logic, Venn Diagrams & Syllogism, Statements and Conclusion, Assumptions and Course of Actions	6
5	**Logical Fallacies & Practices in Critical thinking** Fallacious Arguments, Fallacies of Relevance, Fallacies of Insufficient Evidence, Critical & Logical Thinking for Students: Solving & Creativity, Critical and Logical Thinking for working professionals Decision-making, Creativity and Problem Solving, Critical and Logical Thinking for everyone	5
Total Hours		**30**

Textbook :

1 An Introduction to Critical Thinking, M. Sen, Pearson., 2010

References:

1 Introduction to Logic, Introduction to Logic, Copi, I. M., Cohen, C., & McMahon, K, Pearson., 2016

2 Give Your Speech, Change the World: How to Move Your Audience to Action, Give Your Speech, Change the World: How to Move Your Audience to Action, Morgan, N, HBPS, 2003

3 Analytic Reasoning, Analytic Reasoning, Pandey, M.K., BSC Publishing Co. Pvt. Ltd, 2022

4 A Modern Approach to Logical Reasoning, A Modern Approach to Logical Reasoning, Aggarwal, R.S., S.Chand Publising Co., 2024

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	35.00	35.00	30.00	0.00

Instructional Method:

1 THEORY

Supplementary Resources:

1 MIT OpenCourseWare - Introduction to Logic: https://ocw.mit.edu/courses/linguistics-and-philosophy/24-241-logic-i-fall-2005/

MR. PARAS CHANDULAL RUGHANI
Digitally signed by (Name of HOD)

DR. SANJEET SINGH
Digitally signed by (Name of Dean/ Principal)

Supplementary Resources:

2 Stanford Encyclopedia of Philosophy - Logic:https://plato.stanford.edu/entries/logic/

3 Khan Academy - Logical Reasoning: https://www.khanacademy.org/test-prep/lsat/lsat-lessons/lsat-logical-reasoning

MR. PARAS CHANDULAL RUGHANI

Digitally signed by (Name of HOD)

DR. SANJEET SINGH

Digitally signed by (Name of Dean/ Principal)