

**Modern Education Society's
Nowrosjee Wadia College(Autonomous)**
(An autonomous College affiliated to Savitribai Phule Pune University)

F.Y.B.A.LOGIC

Semester1

Syllabus

(Based on NEP 2.0)

(To be implemented from the Academic Year2024-25)

Course Description

This course discusses the art of correct thinking by exposing the students to different Logical concepts and methods of Logical reasoning. It aims to cultivate and develop the art of critical thinking which is necessary for the academic formation and for strengthening the faith.

Course Objectives

This course aims to introduce students to argumentation, critical analysis, and evaluation. Such skills in critical thinking are integral to the discipline of philosophy. They are also useful in other academic domains, in the workplace, and in everyday life.

Course Outcomes

- Identify features of arguments;
- Recognize deduction, induction arguments
- Proficiency in communication: Writing, speaking;
- Understanding of basic concepts across the domains of knowledge;
- Critical, analytical and creative thinking;
- Capacity to personally interpret human experience;
- Capacity to reflect critically and shared concerns and think of innovative, creative;
- Ability to solve problems;
- Identify the main conclusion of arguments;
- Understand common fallacies in reasoning;
- Recognize categorical statements, Venn Diagrams, the traditional square of opposition and immediate inference;

**Title of the course: B.A. Structure of the Course
Semester: 1**

Course Code	Course Title	Credit	Evaluation		
			T/P	CE	SEE
NLOGMJ111	TRADITIONALLOGIC	2(T)	15	35	50
NLOGMJ112		2(P)	15	35	50

Credits	Traditional Logic	No. of Lectures
	Contents of the course Theory	
1	<p>Logic as the study of Inference:</p> <p>1.Introduction to logic as branch of philosophy, Concept of logic, 2.Brief Western concepts of Deduction and Induction Arguments and inference, Truth, validity. 3.Brief Indian theories of Pramana- Nyaya Anumana, Syadavad-Jain. 4.Applications of logic: Fuzzy Logic, Computer logic</p>	15
2	<p>Classification of propositions</p> <p>1.Difference between: I. Proposition and sentence II. Proposition and prepositional form.</p> <p>2.Basic subject-predicate structure and components :Quantifier, Subject term, copula, predicate term</p> <p>3.Classification of proposition into categorical proposition–(A.E.I.O.), Four-fold scheme of Categorical Propositions (AEIO).</p> <p>4.Conditional Propositions: Hypothetical and Disjunctive propositions, Venn Diagram.</p>	15
Credit	Traditional Logic	Practical
	Contents of the course Practical	
1	<p>Inference</p> <p>Classification of Inference:</p> <p>1. Immediate inference and Mediate inference</p> <p>A. Immediate Inference:</p> <p>I. Opposition as immediate inference (Square of opposition) II. Education: Conversion, Obversion</p> <p>B. Mediate Inference: Categorical Syllogism(Rules of syllogism, Formal fallacies, Figures and Moods of Syllogism, Simple and Mixed Syllogism)</p>	30

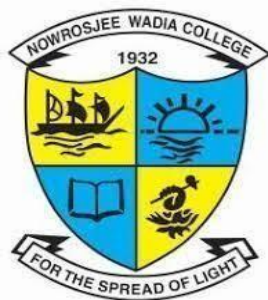
2	<p>Fallacies & Dilemma</p> <p>1. Concept of Fallacy</p> <p>2. Fallacy of Indian Logic (Hetvabhasa): Asiddha/ Sadhyasam, Savyabhicara, Satpratipaksa, Badhita and Viruddha</p> <p>3. Western: Non-formal fallacies: Division, Composition, Accident, Converse Accident, Many Questions, Petitio Principii (Ignoratio Elenchi: Argumentum: ad baculum, admisericordiam, ad hominem, ad ignorantiam, verecundiam, ad populum)</p> <p>4. Dilemma and its kinds: Refutation and Rebuttal</p> <p>(Nature, Rules and deductions based on these types)</p>	30
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Prescribed reading:

1. Copi Irving, Cohen Carl, Introduction to Logic, Prentice- Hall of India Private Ltd. New Delhi-2005
2. Copi Irving, Symbolic Logic, Pearson Prentice Hall, Fifth Edition, 2006
3. Quine W. V. O.: *Methods of Logic* (Relevant Chapters)
4. बारलिंगे एस.एस. A Modern Introduction to Indian Logic: भारतीय तर्कशास्त्राची रूपरेषा, परामर्ष प्रकाशन, पुणे विद्यापीठ, पुणे.
5. प्रबोधनप्रबोध: संपादक, एस.एम. भावे, भारतीय तर्कशास्त्राची वाटचाल : एक चिकित्साक आढावा, प्रदीप गोखले लिखित प्रज्ञापाठशाळा मंडळ, वार्ड, २०१६
6. Michael Huth and Mark Ryan, *Logic in Computer Science* Cambridge university press, 2004
7. Timothy J. Ross, *Fuzzy Logic*, Wiley publication

Reference books:

1. कावळे.एस.आर. आणि गोळे लीला; सुगम आकारीक तर्कशास्त्र, पुणे विद्यार्थी प्रकाशन गृह, पुणे
2. १९७२
3. मोरे, हेमा; तर्कशास्त्र, निमित्त प्रकाशन पुणे १९९५
4. दर्यापूरकर, परंपरीक तर्कशास्त्र, भूपाली दर्यापूरकर, सोलापूर, १९७८
5. ठाकरे संतोष, तर्कशास्त्र, कुंभ प्रकाशन, अमरावती, २००१
6. डॉ. जोशी बी.आर., प्रा. कुलकर्णी एस. व्ही. , प्रा. मठवाले ई.आर. , तर्कविद्या-1, स्वाती प्रकाशन, पूर्णा, जिल्हा-परभणी, २००२



Modern Education Society's
Nowrosjee Wadia College
(An autonomous college Affiliated to Savitribai Phule Pune University Pune)
F.Y.B.A.LOGIC
Semester2
Syllabus
(Based on NEP 2.0)
(To be implemented from the Academic Year 2024-25)

Objectives:

1. To introduce Symbolic Logic as an academic discipline to students.
2. To teach students to acquire pleasures in logical thinking.

Title of the course: B.A.

Structure of the Course

Semester: 2

Course Code	Course Title	Credit	Evaluation		
		T/P	CE	SEE	TOTAL
NLOGMJ121	PROPOSITIONAL LOGIC	2(T)	15	35	50
NLOGMJ122		2(P)	15	35	50

Credit	Propositional Logic	No. of Lectures
	Contents of the course Theory	
1	<p>Modern classification of propositions</p> <ol style="list-style-type: none"> 1. Symbolic logic: nature, scope and applications 2. Propositional variables, Propositional constants, Logical constants, and basic truth functions 3. Modern understanding of Propositions and their classification into: <ol style="list-style-type: none"> a. Simple and compound propositions b. Truth-functionally and non-truth-functionally compound propositions. 4. Symbolizing propositions using the above. 	15
2	<p>Decision Procedures</p> <ol style="list-style-type: none"> 1. Concept of decision procedure 2. Use of the following Decision Procedures to identify propositional Forms as <ol style="list-style-type: none"> a. Tautologous, b. Contradictory c. Contingent 3. Method of Truth Table, Shorter Truth-Table, 	15
Credit	Propositional Logic	No. of Lectures
	Contents of the course Practical	
1	<p>Deductive Proof</p> <ol style="list-style-type: none"> 1. Rules of Inference ; Rules of Replacement. 2. Concept of Deductive Proof: Introduction to Direct Proof, Indirect Proof and Conditional Proof. 	30
2	<p>Validity & Invalidity</p> <ol style="list-style-type: none"> 1. Validity <ol style="list-style-type: none"> a. Direct proof b. Indirect proof c. Conditional proof 2. Invalidity Use of the method of assigning truth-values to demonstrate the invalidity of invalid arguments. Application of the methods of reasoning to examples of different kinds. 	30

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1. Copi Irving, Cohen Carl, Introduction to Logic, Prentice- Hall of India Private Ltd. New Delhi-2005
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5. प्रबोधनप्रबोध:संपादक, एस.एम. भावे, भारतीय तर्कशास्त्राची वाटचाल :एक चिकस्तक आढावा, प्रदीप गोखले लिखित प्रज्ञापाठशाळा मंडळ, वाई, २०१६

Books for Reference:

1. कावळे.एस.आर. आणि गोळे लीला; सुगम आकारीक तर्कशास्त्र, पुणे विद्यार्थी प्रकाशन गृह, पुणे
2. १९७२
3. मोरे, हेमा; तर्कशास्त्र, निमित्त प्रकाशन पुणे १९९५
4. दर्यापूरकर, परंपरीक तर्कशास्त्र, भूपाली दर्यापूरकर, सोलापूर, १९७८
5. ठाकरे संतोष, तर्कशास्त्र, कुंभ प्रकाशन, अमरावती, २००१
6. डॉ. जोशी बी.आर., प्रा. कुलकर्णी एस. व्ही. , प्रा. मठवाले ई.आर. , तर्कविद्या-1, स्वाती प्रकाशन, पूर्णा, जिल्हा-परभणी, २००२

Course Outcomes
1. To introduce Logic as an academic discipline to students
2. To inculcate Critical and systematic thinking in students mind
3. Stimulating them to engage fundamental questions about reality, knowledge, and value.
4. To create awareness about the significance of logical thinking.
5. Enhancing the reading, writing, and public speaking skills.
6. To know the development of logic, scope of logic.
7. Identify the types of logic.
8. Relation between proposition and sentence.
9. Identify the recent application of Logic.