



Anekant Education Society's

Tuljaram Chaturchand College, Baramati

(Autonomous)

Three Year B.A. Degree Program in Philosophy & Logic

(Faculty of Humanities)

CBCS Syllabus

S.Y. B. A. (Logic) Semester -III

For Department of Philosophy & Logic

Tuljaram Chaturchand College, Baramati

Choice Based Credit System Syllabus (2019 Pattern)

To be implemented from Academic Year 2020-2021

CBCS Syllabus SYBA Logic
(w. e. from June, 2020)

Name of the Programme	: B.A Philosophy & Logic
Program Code	: LOG
Class	: S.Y.B.A.
Semester	: III
Course Type	: General (G-2) (Theory)
Course Name	: FORMAL LOGIC
Course Code	: LOG 2301
No. of Lectures	: 48
No. of Credits	: 03

Course Objectives:

- I. To acquaint Students with Symbolic Logic
- II. To introduce techniques of decision procedure and formal proof of validity
- III. To introduce Deductive systems and symbolizations and derivations of first order Predicate logic
- IV. Familiarise students with the importance of logical thinking in various disciplines.
- V. Introduce students to the basic concepts of formal logic.
- VI. Teach the construction and evaluation of truth tables.
- VII. Explore the use of rules of inference

Course Outcomes:

- CO1. Students can acquire critical thinking ability.
- CO2. It enhances logical reasoning capacity in the student..
- CO3. It can improve students' analytical thinking capacity.
- CO4. It helps students to improve their decision-making power.
- CO5. Students can make logical decisions in any situation. .
- CO6. Understand the fundamental concepts of formal logic..
- CO7. Construct and evaluate truth tables for complex logical expressions.

Semester- III LOG-2301 G-2 FORMAL LOGIC

Unit No.	Topics & Learning Points	No. of Hours
1	A. What is Symbolic Logic? B. Classification of Propositions: Simple and Compound C. Determining Propositions as Tautologies, Contradictory and Contingent	12
2	A. The Basic Truth-functions B. Methods of Decision Procedure: Truth-table, Shorter Truth-table C. Exercises Of Explanations	12
3	A. Rules of Inference B. Exercises Of Explanations C. Conditional Proof Methods D. Exercises Of Explanations	12
4	A. Introduction to Set Theory B. Types of Set Theory C. Venn Diagram D. Explanations Venn Diagram	12

Readings: Reference Book:

1. Copi, I. M., Introduction to Logic, Macmillan Co. New York, 1986. (14th Edition)
2. Copi, I. M., Symbolic Logic, Macmillan Co. New York, 1995 (5th Ed.).
3. Patrick Suppes (Chapter on Set Theory)
4. Symbolic logic (4thed.) I. M. Copi.
5. Formal logic : scope and limits
6. तर्कविद्या भाग १,२ डॉ. बी. आर. जोशी, प्रा. कुलकर्णी, प्रा. मठवाले
7. तर्कशास्त्र (पारंपरिक व सांकेतिक) – डॉ. सुनील ब. भोईटे
8. तर्कशास्त्र - श्रीनिवास दीक्षित
9. तर्कशास्त्राची मूलतत्त्वे वाडेकर दे.द.
10. सुलभ तर्कशास्त्र प्रा मुकुंद कदम
11. पारंपरिक तर्कशास्त्र - नांगरे, फडतारे, चौगुले, हिरवे, वाघमोडे

Choice Based Credit System Syllabus (2019 Pattern)

Mapping of Program Outcomes with Course Outcomes

Class: SYBA (Sem III)

Subject: Logic

Course: Formal Logic

Course Code: LOG2301 (G-2)

Weightage: 1= weak or low relation, 2= moderate or partial relation, 3= strong or direct relation

Programme Outcomes (POs)

Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8
CO 1	3	2	2	1	2	2	2	3
CO 2	3	1	2	1	3	1	1	3
CO 3	3	1	2	1	2	1	1	2
CO 4	3	1	1	1	2	1	1	2
CO 5	3	2	1	1	2	1	1	1
CO 6	3	2	1	3	1	3	1	3
CO 7	3	3	2	3	1	2	3	3

Justification for the mapping

PO1 Research-Related Skills:

- CO1. Students can acquire critical thinking ability.
- CO2. It enhances logical reasoning capacity in the student.
- CO3. It can improve students' analytical thinking capacity.
- CO8. Critical Thinking and Problem solving: Exhibit the skill of critical thinking and use higher order cognitive skills to approach problems situated in their social environment, propose feasible solutions and help in its implementation.

Justification: These course outcomes contribute to developing research-related skills by fostering critical thinking, logical reasoning, and analytical abilities. These skills are essential for planning, executing, and reporting the results of a research project.

PO2 Effective Citizenship and Ethics:

- CO8. Critical Thinking and Problem solving: Exhibit the skill of critical thinking and use higher order cognitive skills to approach problems situated in their social environment, propose feasible solutions and help in its implementation.

Justification: Critical thinking skills, emphasised in CO8, enable students to act with an informed awareness of moral and ethical issues, aligning with the effective citizenship and ethics program outcome.

PO3 Social Competence:

- CO1. Students can acquire critical thinking ability.
- CO2. It enhances logical reasoning capacity in the student.
- CO3. It can improve students' analytical thinking capacity.
- CO7. Construct and evaluate truth tables for complex logical expressions.

Justification: Communication skills, logical reasoning, and the ability to construct truth tables contribute to social competence, helping students express themselves clearly, build interpersonal relationships, and demonstrate multicultural sensitivity.

PO4 Disciplinary Knowledge:

- CO6. Understand the fundamental concepts of formal logic.
- CO7. Construct and evaluate truth tables for complex logical expressions.

Justification: CO6 and CO7 directly address the development of disciplinary knowledge by ensuring a strong understanding of formal logic, which is fundamental to various disciplines.

PO5 Personal and Professional Competence:

- CO2. It enhances logical reasoning capacity in the student.
- CO4. It helps students to improve their decision-making power.
- CO5. Students can make logical decisions in any situation.

Justification: Logical reasoning and improved decision-making power, as emphasised in CO2 and CO4, contribute to personal and professional competence.

PO6 Self-directed and Life-long Learning:

- CO1. Students can acquire critical thinking ability.
- CO6. Understand the fundamental concepts of formal logic.

Justification: Critical thinking and understanding fundamental concepts are crucial for fostering self-directed and life-long learning skills.

PO7 Environment and Sustainability:

- CO8. Critical Thinking and Problem solving: Exhibit the skill of critical thinking and use higher order cognitive skills to approach problems situated in their social environment, propose feasible solutions and help in its implementation.

Justification: Critical thinking and problem-solving skills, as highlighted in CO8, enable students to understand the impact of scientific solutions in societal and environmental contexts, aligning with the environment and sustainability program outcome.

PO8 Critical Thinking and Problem Solving:

- CO1. Students can acquire critical thinking ability.
- CO2. It enhances logical reasoning capacity in the student.
- CO3. It can improve students' analytical thinking capacity.
- CO4. It helps students to improve their decision-making power.
- CO5. Students can make logical decisions in any situation.
- CO8. Critical Thinking and Problem solving: Exhibit the skill of critical thinking and use higher order cognitive skills to approach problems situated in their social environment, propose feasible solutions and help in its implementation.