



Anekant Education Society's
Tuljaram Chaturchand College, Baramati
(Autonomous)

Three Year B.A. Degree Program in Philosophy & Logic
(Faculty of Humanities)

CBCS Syllabus

F.Y. B. A. (Logic) Semester -II

For Department of Philosophy & Logic
Tuljaram Chaturchand College, Baramati

Choice Based Credit System Syllabus (2019 Pattern)

To be implemented from Academic Year 2019-2020

CBCS Syllabus FYBA Philosophy & Logic
(w. e. from June, 2019)

Name of the Programme	: B.A Philosophy & Logic
Program Code	: LOG
Class	: F.Y.B.A.
Semester	: II
Course Type	: General (Theory)
Course Name	: TRADITIONAL LOGIC (INDUCTIVE LOGIC)
Course Code	: LOG1201
No. of Lectures	: 48
No. of Credits	: 03

Course Objectives:

1. To ensure that students comprehend the steps and principles of the scientific method.
2. To develop critical thinking skills.
3. To familiarise students with basic research skills.
4. To teach students how to formulate clear and testable hypotheses, as well as how to refine them based on data and results.
5. To provide students with the skills to collect, organise, and analyse data using appropriate tools and techniques.
6. To discuss the importance of ethical conduct in scientific research.
7. To encourage independent research and inquiry, where students can apply the scientific method to investigate topics of interest..

Course Outcomes:

- CO1. Students should be able to explain the steps and principles of the scientific method including observation, hypothesis formulation, experimentation, data collection, and conclusion drawing.
- CO2. Students should be able to critically thinking Skills.
- CO3. Students should be capable of designing, conducting, and evaluating scientific research
- CO4. Students should have acquired practical research skills
- CO5. Students should understand the importance of ethical conduct in scientific research and be able to identify and address ethical issues in research.
- CO6. Students should be capable of revising and refining hypotheses based on empirical data and adapting research methods as needed.
- CO7. Students should be able to conduct independent research or inquiry, applying the scientific method to investigate topics of interest.

Semester- II LOG-1201 TRADITIONAL LOGIC (INDUCTIVE LOGIC)

Unit No.	Topics & Learning Points	No. of Hours
1	A: Nature and kinds of inductive inference 1. Simple enumeration 2. Analogy 3. Scientific induction B: Grounds of induction 1. Principles of causality and uniformity of nature 2. Observation- Characteristics, fallacies 3. Experiment- Merits and Demerits	16
2	Hypothesis A. Definition and Nature of Hypothesis B. Conditions of valid Hypothesis C. Verification and proof of Hypothesis	16
3	Laws of Nature and Explanation A. Meaning and types of Laws B. Kinds of Laws of Nature C. Scientific Explanation- Kinds of scientific Explanation	16

Readings: Reference Book:

1. An Introduction to Logic and Scientific Method.- Cohen and Nagel
2. Essentials of Scientific Method - Wolf
3. Quine w.v.o; methods of logic (relevant chapters)
4. More .Hema; Tarkasastra Nimitta Prakashan pune 1995
5. तर्कशास्त्र आणि वैज्ञानिक पध्दती - वाडेकर, हरोलीकर
6. आकारिक तर्कशास्त्र - मे. पु. रेगे.
7. तर्कविद्या भाग १, २- डॉ. बी. आर जोशी, प्रा. कुलकर्णी, मठवाले
8. आधुनिक तर्कशास्त्र - नांगरे, डॉ. चौगुले, प्रा. फरतारे (शिवाजी वि. कोल्हापूर)
9. तर्कशास्त्र – श्रीनिवास दिक्षीत
10. तर्कशास्त्राची मूलतत्त्वे.- वाडेकर दे. द.
11. पारंपारिक तर्कशास्त्र - नांगरे, फडतारे, चौगुले, हिरवे, बाघमोडे
12. वैज्ञानिक पध्दती- ज. रा. दाभोळे

Choice Based Credit System Syllabus (2019 Pattern)

Mapping of Program Outcomes with Course Outcomes

Class: FYBA (Sem II)

Subject: Logic

Course: TRADITIONAL LOGIC (INDUCTIVE LOGIC)

Course Code: LOG1101

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		3		
CO 2						2		2
CO 3	3		3	3		3		
CO 4				2		2		
CO 5	2	3					3	
CO 6	3		3	3		3		3
CO 7	3				2	3		3

Justification for the mapping

PO1 - Research-Related Skills:

CO1 - Students should be able to explain the steps and principles of the scientific method including observation, hypothesis formulation, experimentation, data collection, and conclusion drawing.

CO3 - Students should be capable of designing, conducting, and evaluating scientific research.

CO4 - Students should have acquired practical research skills.

CO6 - Students should be capable of revising and refining hypotheses based on empirical data and adapting research methods as needed.

CO7 - Students should be able to conduct independent research or inquiry, applying the scientific method to investigate topics of interest.

- *Justification:* PO1 emphasises seeking opportunities for research and higher academic achievements. CO1, CO3, CO4, CO6, and CO7 directly align with this by focusing

on the understanding and application of the scientific method, design and conduct of research, practical research skills, and independent inquiry.

PO2 - Effective Citizenship and Ethics:

- CO5 - Students should understand the importance of ethical conduct in scientific research and be able to identify and address ethical issues in research.
 - *Justification:* PO2 emphasises an informed awareness of moral and ethical issues. CO5 aligns with this by focusing on the importance of ethical conduct in scientific research and addressing ethical issues, contributing to effective citizenship and professional responsibility.

PO4 - Disciplinary Knowledge:

- CO1 - Students should be able to explain the steps and principles of the scientific method including observation, hypothesis formulation, experimentation, data collection, and conclusion drawing.
- CO3 - Students should be capable of designing, conducting, and evaluating scientific research.
- CO4 - Students should have acquired practical research skills.
- CO5 - Students should understand the importance of ethical conduct in scientific research and be able to identify and address ethical issues in research.
- CO6 - Students should be capable of revising and refining hypotheses based on empirical data and adapting research methods as needed.
- CO7 - Students should be able to conduct independent research or inquiry, applying the scientific method to investigate topics of interest.
 - *Justification:* PO4 emphasises a blend of conventional discipline knowledge and its applications. CO1, CO3, CO4, CO5, CO6, and CO7 directly align with this by focusing on various aspects of scientific research, including the application of disciplinary knowledge to real-world problems.

PO6 - Self-directed and Life-long learning:

- CO1 - Students should be able to explain the steps and principles of the scientific method including observation, hypothesis formulation, experimentation, data collection, and conclusion drawing.
- CO3 - Students should be capable of designing, conducting, and evaluating scientific research.
- CO6 - Students should be capable of revising and refining hypotheses based on empirical data and adapting research methods as needed.
- CO7 - Students should be able to conduct independent research or inquiry, applying the scientific method to investigate topics of interest.
 - *Justification:* PO6 emphasises the ability to engage in independent and life-long learning. CO1, CO3, CO6, and CO7 directly align with this by focusing on understanding, conducting, and adapting research independently.

PO7- Environment and Sustainability:

- CO5 - Students should understand the importance of ethical conduct in scientific research and be able to identify and address ethical issues in research.
 - *Justification:* PO7 emphasises understanding the impact of scientific solutions in societal and environmental contexts. CO5 aligns with this by focusing on the importance of ethical conduct in scientific research, contributing to environmental and societal considerations.

PO8 - Critical Thinking and Problem-solving:

- CO2 - Students should be able to critically think Skills.
- CO6 - Students should be capable of revising and refining hypotheses based on empirical data and adapting research methods as needed.
- CO7 - Students should be able to conduct independent research or inquiry, applying the scientific method to investigate topics of interest.
 - *Justification:* PO8 emphasises critical thinking and problem-solving skills. CO2, CO6, and CO7 directly align with this by focusing on critical thinking skills and the application of the scientific method to investigate and solve problems.