

Category II

BA (Prog.) with Philosophy as Major

(Courses for Undergraduate Programme of study with Philosophy discipline as one of the Core Disciplines)

**DISCIPLINE-SPECIFIC CORE COURSE (DSC-7): Truth Functional Logic**

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Truth-Functional Logic DSC 7	4	3	1	Nil	12th Passed	None

Learning Objective

- This paper aims to equip the students with an understanding of basic logical concepts in modern logical theory
- This paper helps to enhance the student's reasoning capacity and problem-solving skills.
- In this paper students will learn to appreciate disciplined and rigorous thinking as applied to arguments in natural language
- The paper is designed to help students understand the power of a deductive theory and also the importance of the notion of deduction

Learning Outcomes

After completing this course:

- Students will be able to evaluate arguments symbolized in truth functional notation.
- Students will learn to use proof system for both sentential logic and predicate logic to construct derivations for valid arguments.
- Students will be able to formulate counterexamples for invalid arguments symbolized in the notations of predicate logic.
- Students will develop critical thinking and problem-solving skills.

**UNIT 1: LOGIC OF SIMPLE AND COMPOUND PROPOSITIONS (Sentential) (12 Hours, 4 Weeks)**

1. Sentence, Proposition and Argument.

2. Logical Connectives: Conjunction, Negation and Disjunction; Interdefinability
3. Truth Tables; Material Implication and Equivalence

**UNIT II: SYMBOLISATION(12 Hours, 4Weeks)**

1. Symbolisation and Translation
2. Truth table Method
3. Shorter Truth Table method (Reductio ad absurdum)

**UNIT III: PROVING VALIDITY (PROOF PROCEDURES) (9 Hours, 3 Weeks)**

1. Derivation Rules: Rules of Inference
2. Rules of Replacement
3. Formal Proof of Validity

**UNIT IV: LOGIC OF SINGULAR/ UNIVERSAL PROPOSITIONS (12 Hours, 4 Weeks)**

1. Symbolization of Categorical Propositions
2. The Four Rules of Inference (Quantification Rules); Restrictions on UG and EI
4. Proving Validity

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Essential Recommended Reading:

Copi, I.M. Introduction to Logic, 14<sup>th</sup> and 15<sup>th</sup> Edition. India: Pearson, 2013, 2019.

Suggestive Readings:

- Hurley, Patrick. Introduction to Logic. Delhi :Wordsworth, 2007.
- Quine, W.V.O. Methods of Logic. London: Routledge, 1965.
- Sen, Madhucchanda. Logic. Delhi: Pearson, 2008.
- Copi, I.M. Symbolic Logic, 5th edition. India: Pearson, 2008.

**DISCIPLINE SPECIFIC CORE COURSE (DSC-8): Greek Thought**

**CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
DSC 8 Greek Thought	4	3	1	Nil	12th Passed	None

**Learning Objectives**

- The course is intended for giving a comprehensive account of early Greco-Roman Philosophy, popularly known as early 'Greek Thought'
- The content covered in the course will be the fundamental aspects of being, knowledge and virtue
- The thinkers covered in the course will be from the Pre-Socratics to the Stoics

**Learning Outcomes**

- The student will comprehend major trends of thought in Greek Philosophy
- The student will understand the most fundamental aspects of philosophy that remain with us today and ideas that still form the frame of the subject
- The student will be able to critically assess a significant aspect of western intellectual history

**Unit -I: Cosmos**

**(12 Hours, 4 Weeks)**

1. The spirit of Naturalism
2. The concept of *Arche*

**Essential/Recommended Readings:**

J. Barnes. *Early Greek Philosophy*. Harmondsworth: Penguin Books, 1981. p.xi-xxv.

Curd, Patricia. *A Presocratic Reader: Selected Fragments and Testimonia* Second Edition Edited, with Introduction. Translations by Richard D Mc Kirahan and Patricia Curd (Hackett Publishing Company, Inc, 2011) p.13-19.

Kirk, G.S and Raven, J.E, *The Presocratic Philosophers: A Critical History with Selection of Texts* (Cambridge; At The University Press, 1957) pp74-99

Vijay Tankha. *Ancient Greek Philosophy*. (Pearson: Delhi, 2014). Chapter-1

### **Unit-II: Metaphysics**

**(12 Hours, 4 Weeks)**

1. Doctrine of Flux
2. Theory of Number
3. Notion of Being

Essential/Recommended Readings:

Curd, Patricia. *A Presocratic Reader: Selected Fragments and Testimonia* Second Edition Edited, with Introduction. Translations by RichardDMckirahan and Patricia Curd (Hackett Publishing Company, Inc, 2011) ,p.39-65,

G.S Kirk and J.E. Raven, *The Pre-Socratic Philosophers*, Chapters vi and x

Vijay Tankha. *Ancient Greek Philosophy*. (Pearson: Delhi, 2014). Chapters 2, 3 and 5

### **Unit-III: Epistemology and Ethics**

**(9 Hours, 3 Weeks)**

1. The concept of Knowledge in Greek Thought
2. The concept of Virtue in Greek Thought

Essential/Recommended Readings:

Christopher Shields (edited) *The Blackwell Guide to Ancient Philosophy*. (Blackwell Publishing, 2003), Chapter-2, Parts I and II

Mary Louise Gill and Pierre Pellegrin (eds). *A Companion to Ancient Philosophy*, (Blackwell, 2006.) Relevant chapters

Vijay Tankha. *Ancient Greek Philosophy*. (Pearson: Delhi, 2014)

Chapter-9 (p.316-324) and chapter-10

**Unit-IV: The Best Life**

**(12 Hours, 4 Weeks)**

1. Pleasure and happiness
2. Living according to nature

Essential/Recommended Readings:

Christopher Shields (edited). *The Blackwell Guide to Ancient Philosophy* (Blackwell Publishing, 2003, chapters 12 and 13

Reference Reading for all units:

Warren, James & Frisbee Sheffield (eds.). *The Routledge Companion to Ancient Philosophy*. Routledge: London and New York, 2014. Part-1., 94-124 and chapters 27 and 30.