

PROFESSOR'S NAME	Prof. Nirmalya Guha
DEPARTMENT	Department of Humanistic Studies
INSTITUTE	IIT (BHU)
COURSE OUTLINE	This course is intended for those students and scholars who are interested in Logic, Linguistics, Mathematics, Computer Science (Artificial Intelligence), Cognitive Science and Philosophy of Language.

COURSE DETAILS

S. No	Module ID/ Lecture ID	Lecture Title/Topic
1	L1	Formal Logic and Semantics: An Introduction
2	L2	Two Approaches: Truthconditional and Modeltheoretic
3	L3	Introduction to Propositional Calculus
4	L4	Introduction to Sets and Functions
5	L5	L ₀ : The Simplest Language
6	L6	L _{0E} : The Simplest English
7	L7	Introduction to Predicate Calculus
8	L8	L ₁ : An Artificial Language for Predicate Calculus
9	L9	L _{1E} : An English-like Language and Value- assignment Function g (Part 1)
10	L10	L _{1E} : An English-like Language and Valueassignment Function g (part 2)

11	L11	Type Theory
12	L12	L _{type} : A Type-theoretic Language
13	L13	Lambda Operation and L _{lambda} (Part 1)
14	L14	Lambda Operation and L _{lambda} (Part 2)
15	L15	Tenses and Modalities
16	L16	Tense and Modal Operators
17	L17	Extension and Intension
18	L18	IL: An Intensional Language (Part 1)
19	L19	IL: An Intensional Language (Part 2)
20	L20	Montague's PTQ: A Brief Sketch

As Reference:

David, R. D., E. W. Robert and P. Stanley (1981). *Introduction to Montague Semantics*. D. Reidel Publishing Company, Dordrecht

Montague, R. (1973). The Proper Treatment of Quantification in Ordinary English, published in Hintikka, J, J. Moravcsik and P. Suppes (eds.). *Approaches to Natural Language*. Dordrecht

Kalish, D. and R. Montague (1964). *Logic: Techniques of Formal Reasoning*. New York, Harcourt, Brace & World

Copi, I. M. (1979). *Symbolic Logic*. Pearson