Ambedkar University Delhi

Course Outline

Monsoon Semester (July-December 2017)

School:	Undergraduate Studies			
Programme with title:	BA (Honours)			
Semester to which offered: (I/ III/ V)	I semester			
Course Title:	Logic and Reasoning			
Credits:	4 Credits			
Course Code (new):	SUS1FC044			
Course Code (old):	LR			
Type of Course:	Compulsory	No	Cohort	BA (H) Mathematics
	Elective	yes	Cohort	BA (H) All Program

For SUS only (Mark an X for as many as appropriate):

1. Foundation (Compulsory)
2. Foundation (Elective)
3. Discipline (Compulsory) X
4. Discipline (Elective) X
5. Elective

Course Coordinator and Team: Ramneek Khassa (CC) and Maths Y (Adjunct Faculty)

Email of course coordinator: ramneek@aud.ac.in

Pre-requisites: A knowledge of school mathematics broadly of the X grade CBSE level

Aim: The aim of the course is to offer a gentle introduction to very basic concepts of sets and logic, to develop a familiarity with simple techniques for quantifying and analysing data including a capacity to use simple computer worksheet programmes for the same.

Another aspect to the course is that it aims to create an appreciation of mathematics in nature via discussions on symmetry and perspective in art. Real-life examples, hands-on projects, presentations, case studies, visualisation and basic computing tools will be used to reinforce skills of logical reasoning, data analysis and interpretation.

Brief description of modules/ Main modules:

1. **Sets, logic and reasoning**
2. **Quantitative methods, Data analysis and interpretation.**
3. **Awareness and reasoning**

Refererences:

1. Shobha Bagai, Pankaj Jain and Geetha Venkataraman, *Mathematical Awareness*, Institute of Life Long Learning, University of Delhi, 2009. (Print version of e-lessons.)

2. James Wooland, *Maths for liberal arts*, Florida State University, www.math.fsu.edu/~wooland/.

3. Handling data: www.bbc.co.uk/schools/revisewise/maths/data/

There will also be handouts from a manuscript titled

`A Bridge To Mathematics'

1. Shobha Bagai, Amber Habib and Geetha Venkataraman are coauthoring this manuscript. This is an ongoing project supported by AUD.

Tentative Assessment schedule with details of weightage:

S.No	Assessment	Date/period in which Assessment will take place	Weightage
1	Class test	End August	10%
2	Mid Semester Exam	End September/ early October	25%
3	Home Assignments/Lab	Throughout the semester	20%
4	Presentation/ Viva	End October/ early November	10%
5	End Semester Exam	As per AUD Academic Calendar	35%