School: Undergraduate Studies

Programme with title: BA (Honours)

Semester to which offered: (II/IV/ VI)   II semester

Course Title: Analysis I

Credits: 4 Credits

Course Code (new):   SUS1MA502

Course Code (old):   M04

Type of Course:	Compulsory	yes	Cohort	BA (H) Mathematics
	Elective	yes	Cohort	BA (H) other than Mathematics

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: Balchand Prajapati (CC)

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

Pre-requisites: Mathematics at XII grade level and 4 credits from M01
(Introduction to Mathematical Thinking)

Aim: The aim of the course is to introduce the students to the foundations of advanced calculus. Basic techniques of differentiation and integration are covered along with a review of sequences. Lots of examples based on these topics are done in order to prepare for real analysis.

Brief description of modules/ Main modules:

1. Sequences
2. Limits and continuity
3. Differentiation and Integration

Reading List:

1. Bartle and Sherbert, Introduction to Real Analysis (Third Edition), John Wiley and Sons (Asia) Pte. Ltd., Singapore, 2002.

2. Weir, Hass and Giordano, Thomas' Calculus (Eleventh Edition), Pearson, 2009

ADDITIONAL REFERENCE:

3. Salas, Hille and Etgen, Calculus: One and several variables (Tenth Edition), John Wiley and Sons, Inc., 2007.

Assessments:

Components	Weightage	Schedule
1. Class Test	10%	Second week of February
2. Mid Semester Test	25%	As per AUD timetable
3. Presentation/Viva	15%	First week of April
4. End Semester Test	35%	As per AUD timetable
5. Tutorial Assessment	15%	Throughout the semester