B.COM. SEMESTER – 2

4	MDC 2	MATHEMATICS FOR COMMERCE – 2

Name of the Course: **Mathematics for Commerce – 2**
Course credit: **04**
Teaching Hours: **60 (Hours)**
Total marks: **100**

Objectives:
The course aims to familiarize students with the applications of Mathematics techniques in business decision making.

Learning Outcomes:
After completion of the course, learners will be able to:
Acquire proficiency in using different mathematical tools (Determinant, Matrix, Limit, Mathematical Induction, Equations) in solving real life business and economic problems.

PARTICULAR	NO. OF LECTURES
UNIT NO. 1 : DETERMINANT	
- Definition - Order 2x2,3x3 - Cramer's Rule - Properties of Determinant - Examples	**12**
UNIT NO. 2 : MATRIX	
- Definition - Types of Matrices - Matrix Operation 1) Addition, Subtraction 2) Products and their properties - Transpose of Matrix - Adjoint of Matrix, Inverse of Matrix - Solution of Simultaneous linear equation using inverse matrix - Examples	**12**
UNIT NO. 3 : LIMIT	
- Introduction, Meaning of x->a, x->0 - Limit of a Function (Definition) - Rules of limits - Standard limits - Examples	**12**
UNIT NO. 4 : MATHEMATICAL INDUCTION	
- Introduction - Principle of Mathematical Induction - Meaning of Sequence and Series - Sigma Notation n, n square, n cube (With Proof) - Examples	**12**
UNIT NO. 5 : EQUATIONS	
- Linear Equation - Quadratic Equation	**12**

- Cubic Equation - Higher Order Equation - Degree of Equation - Simultaneous Linear Equation - Quadratic Equation - Solution to Quadratic Equation - Formulation of an Equation - Solution of Simultaneous Equation 1) Equation are linear 2) Method of Substitution 3) Method of elimination 4) Method of cross multiplication - Examples	
Total Lectures/Hours	**60**

Suggested Readings:

1. Sharma J. K, Business Mathematics: Theory and Applications, Ane Pub. House, Delhi.
2. Soni R.S., Business Mathematics, Pitamber Publishing House.
3. Kapoor V.K., Business mathematics, Sultan Chand & Sons, Delhi.
4. Dowling, E.T. Mathematics for Economics: Schaum Series, McGraw Hill, London.
5. Vohra, N.D.: Quantitative Techniques in Management: Tata McGraw Hill, New Delhi.

Note: Learners are advised to use latest edition of text/reference books