ST JOSEPH'S UNIVERSITY, BENGALURU-27

DEPARTMENT OF MATHEMATICS

Syllabus for Bachelor of Science

(Basic/Hons.)Under National

Education Policy

For Batch 2022-26

Name of the Degree Programme : B.Sc./B.Sc. (Hons)

Open Elective : Mathematics Semester IV

MTOE - 12: Wealth Management

Total Credits for the Programme : 176 (till 8 semesters)

Starting year of implementation : 2022 -23

MTOE - 12: Wealth Management	
Teaching Hours: 3 Hours/Week	Credits: 3
Total Teaching Hours: 42 Hours	Max.Marks:100 (S.A.-60+I.A.-40)

Course Objectives: This course will enable the students to
- Apply the simple and compound interest methods for computing the present and future value of single and a series of uneven cash outflows and inflows.
- Apply the range of annuity methods for calculating the present and future value of cash outflows and inflows.
- Finding maxima and minima of a given equation.

Unit-I: Simple Interest and Compound interest
Simple Interest, Compound Interest. Interest compounded continuously, compound amount at changing rates, nominal rate and effective rate of interest, present value, equation of value and depreciation.**14 hours**

Unit-II: Annuities
Introduction, amount and present value of immediate or ordinary annuity, amortization, annuity due, perpetuity, deferred annuity and sinking fund.   **14 hours**

Unit 3: Application of derivatives in Economics and Commerce
Functions (Concepts only), Derivatives – Standard forms, sum and product of two functions. Application of Differentiation Second order derivative and Application in Economics and Commerce. Maxima and Minima- increasing and decreasing function, convexity of a curve, points of inflexion.
                                                                                                                      14 hours

Textbooks:
A textbook of Business Mathematics by Dr. Padmalochan Hazarika.

Reference Books:
1. Dorai Raj, Business Mathematics, United Publishers.
2. Dr. A K Atre & R V Prabhakar, A Textbook of Business Mathematics.
3. Sanchethi & Kapoor, Business Mathematics.S Chand and Sons, 2014.
4. Qazi Zamiruddin,Vijay K Khanna and S.K Bhambri: Business Mathematics, second edition, S.Chand, 2009.
5. Mohd Shadad Khan,A Text Book of Business Mathematics, Viva Books, 2015.

Blueprint

	Unit-I	**Unit -II**	**Unit- III**	**Answering**	**Total**
2 Marks	1	2	5	6/9	12
6 Marks	2/3	3/5	3/5	8/13	48
					60

Note: The end semester question paper will have a weightage of 25% of the questions from the first half of the syllabus (the portions covered for the mid-semester examination) and a weightage of 75% of the questions from the second half of the syllabus (the portions not covered for the mid-semester examination).