DEPARTMENT OF MATHEMATICS
N A M COLLEGE, KALLIKKANDY

CERTIFICATE COURSE
2021-2022

MATHEMATICS IN DAILY LIFE

Offered by

Department of Mathematics
NAM College,Kallikkandy

About the course

The Certificate Course
"Mathematics in Daily Life"
is open to all students who
have passed the Higher
Secondary Examination.
The aim of this course is to
make the learner to acquire
knowledge about Basic
Mathematics in finance.

Course duration : 30 hours

For Details & Registration

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Mathematics in daily life (CC21MAT01)

Course Details

The Certificate Course "Mathematics in daily life" is open to all those who have passed higher secondary examination .The aim of this course is to make the learner to acquire knowledge about Basic Mathematics in finance. The course will be of 30 hour duration, 5 hours in a week.

There will be two assignments as a part of continuous evaluation and an examination after the completion of all classes. Marks obtained by the candidate both in Assignment and end examination will be considered for the purpose of determining the final results. A certificate will be issued by the College, to the candidate who have successfully completed the course. *To pass the course, the candidate must secure at least 40% of the aggregate marks as a total of internal and examination marks*.

Mark Distribution

Total mark for the course is 50 marks

Maximum marks for assignment is 20 (10 for each assignment)

Maximum Mark for end examination is 30

End examination structure

Maximum Time for end examination is 2 hours

Question pattern is as follows (*All questions will be compulsory)*

Three questions each of 2 marks (Total 6)

Three questions of 4 marks each   (Total 12)

Two questions of 6 marks each   (Total 12)

Grading

Above 80% (including) is first division with distinction and will obtain A+ grade

60% and above but below 80% is first class and will obtain A grade

50% and above but below 60% is second class and will obtain B grade

40% and above but below 50% is third class and will obtain C grade

Objectives

The major objective of this course is to provide a basic knowledge about Basic Mathematics in Finance. The course is designed for under graduate students studying Mathematics.

This course focusses on the optimization technique using differentiation and various types of interests - simple interest and compound interest.

The content of the course include two modules and the topics in each module are mentioned in syllabus.

Objectives of the course are

- ➢ To understand the optimization techniques using differentiation in real time situations.
- ➢ To understand the different types of interests in banking sector and its Mathematical applications in various fields.

Prerequisite for the course

The Course is designed in a simple manner so that anyone with higher secondary level Mathematics knowledge can follows easily. Prerequisite include some basic numerical & computational skills and a knowledge about the results in differentiation and integration.

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Course Content (Syllabus)

Module 1. Optimization using differentiation (15 hours)

    1.1.   Basic idea of Cost of production, Profit, loss, average cost, marginal cost

    1.2.   Profit maximization using differentiation

    1.3.   Consumer surplus

    1.4.   Producers surplus

, **Module 2**. Basic mathematics in Finance (15 hours)

    2.1. Simple Interest

    2.2. Compound Interest

    2.3. Compound interest monthly, quarterly, half yearly

References   : 1. B. M. Aggarwal, Business Mathematics and Statistics,
          2. A. C. Chiang and K. Wainwright, Fundamental Methods of
          Mathematical Economics