

BASICS OF MATHS AND STATISTICS

1. Course overview:

In today's world, data is very important. Every company and its managers have to deal with data irrespective of field of specialization. This course will help bring students from diverse backgrounds to understand the basics of mathematics and statistics. The idea is to make students comfortable with the concepts of mathematics.

2. Prior knowledge required for the course (if any): Basics of Maths & Statistics

3. **Industry Relevance:** Understanding of Basics of Mathematics and statistics is required in every industry for analysis, be it marketing, finance, human resources, operations, or business analytics. The knowledge of Basic Mathematics and statistics is essential for small business establishments to understand every small aspect and carry out their day to day business and reap the best results from their business.

4. **Syllabus:** The syllabus is available at Mumbai University Website:
<https://old.mu.ac.in/wp-content/uploads/2016/06/4.91-Master-of-Management-Systme-MMS-Sem-I-and-II.pdf>

6. Course Outcomes (COs) with corresponding Blooms Taxonomy:

Sr. No.	Course Outcome
1	The course will help student to understand the importance of data in real life and to define the different arithmetic mathematical and statistical operations.
2	The Student will be able to Formulate the problems in Basic Algebra and linear equations ,solve them for the application in real life business situations where profit and cost optimizing situation arises
3	The Student will be able to analyze Algebraic operations, Inequalities problems of business mathematical functions and are required to use the analytical tools to address a range of mathematical topics
4	The Student will be able to Interpret and apply basic operations on algebraic expressions containing exponents. Develop a thorough understanding of best graphics for small to moderate amounts of data, large amounts of data, highlighting variations between distributions, and plots used to highlight the relationship between two variables.

5. Module Overview:

The course is divided into four modules.

Module 1 - Introduction to Basic Arithmetic and Statistical operations this module:

This module familiarizes students with importance of data and mathematical operations like arithmetic operations. It also includes algebraic expressions and fractional algebraic expressions. To demonstrate to explain the relevance and use of statistical tools for analysis. Statistical functions and tools are used for providing statistical analysis of business problems.

Module 2- Basic Algebra and linear equations:

This module explains mathematical techniques for plotting straight lines on the graph to find its slopes. It also focuses on mathematical techniques and uses them for the application in real life business situations where profit and cost optimizing situation arises.

Module 3- Algebraic Operations Inequalities:

Students investigate the fundamentals of business mathematical functions and are required to use analytical tools to address a range of mathematical topics.

Module 4- Data Visualization

This module covers some classic types of graphs and plots to present different types of data. The best graphics for small to moderate amounts of data, large amounts of data, highlighting variations between distributions, and plots used to highlight the relationship between two variables will all be thoroughly understood. The ability to think more clearly about data visualization for business decision making is enriched by taking this module.

Foundation course

Basic of finance

Sr. No.	Topic	Number of sessions of 60 minutes each
	Unit – 1 Basics of Accounting	
1	Introduction to Accounting	1
2	Principles and Conventions of Accounting	1
3	Accounting terms/ Concept	1
4	Accounting equation	2
5	Golden rules of accounting, Journal Book and Entries	2
6	Classifying Business Transactions and Posting to Ledger	2
7	Trial balance	1

Objectives

1. Students will be able to **understand and learn** the basics of finance and its significance in decision making process.
2. Students will be able to **explain** the various steps in classifying, recording and analyzing the transactions process.
3. Students will be able to critically evaluate financial statement information.

FOUNDATION COURSE : BASICS OF ECONOMICS

Course Overview:

The goal of the foundation courses is to ensure that students are able to indulge in more than just their educational syllabi. It gives a fundamental understanding of subjects such as the other broad branches of economics which influences business decision such as Macro-economics, Public policy, International trade etc. It uplifts a student's thinking ability and challenges them to new obstacles.

It is a preparatory course that helps in bringing homogeneity of the class in terms of understanding level.

The students join the course of MMS after completing their graduation from different fields like Arts, Commerce, Science, Engineering, Information Technology, Biotechnology, etc. Thus, the level of knowledge and understanding of the subject varies among the same class. This course helps in bridging the gap so that the class attains a common level of knowledge which would help the facilitator in making the course journey smoother.

Prior knowledge required for the course:

The students need to be familiar with basic understanding of economic concepts like utility, consumer behaviour, price, profit, demand supply etc.

Industry Relevance:

The relevance of the subject of Economics help the probable managers to understand the relevance of its existence in every functional domain of marketing, finance, operations, strategy etc. However, this is a preparatory foundation course that helps in bringing homogeneity and helps in bridging the gap so that the class attains a common level of knowledge which would help the facilitator in making the course journey smoother. The course is followed by Managerial Economics in MMS Semester 1.

Syllabus:

Sr. No	Topic
1	Defining Economics
2	Six Forces of Environment-DESTEP
3	Key Macro Indicators
4	Applications of Economics in Decision Making

Course Learning Outcomes (CO'S) with corresponding Blooms Taxonomy:

1. **Comprehension: Describe:** Students will be able to **describe** the importance of micro and macro-economics, thereby gaining knowledge to recognize its fundamental concepts, to be linked with various streams of management, thereby familiarizing all students in establishing a clear understanding, to help in decision making.

Module Overview:

This foundation course is divided into four modules.

Module 1 -Defining Economics- This module familiarizes with the basic understanding of the subject to link it with the various streams of management, so that the student knows the application of each of these concepts in real life business situation.

Module 2-Six Forces of Environment- DESTEP analysis comprises significant external factors from the macro environment. It stands for demographic, economic, social, technological, ecological and political factors.

Module 3-Key Macro Indicators- Managers need to analyze each and every aspect of the business before reaching any decision. This module familiarizes students with the understanding of Leading and lagging indicators of measurements used when assessing performance in a business or organization.

Module 4-Applications of Economics in Decision Making-Economics provides an analytical understanding of economic activity which is helpful in solving business problems, policy and planning.