INSTITUTE	**FACULTY OF SCIENCE**
PROGRAM	**BACHELOR OF SCIENCE (CHEMISTRY)**
SEMESTER	**2**
COURSE TITLE	**FUNDAMENTALS OF STATISTICS**
COURSE CODE	**02MA0182**
COURSE CREDITS	**4**

Objective:

1 The main aim of the subject is to develop in the students, basic skills of use of elementary statistical methods for analysis in various practical/experiments.

Course Outcomes: After completion of this course, student will be able to:

1 Understand the fundamentals of statistics and its role.

2 Apply different types of central tendencies and measures of variation needed to analyze the behavior of data.

3 Analyze the utility of the meaning of correlation & regression, its role and the difference between the two.

4 Understand the concept of Probability and its importance.

Pre-requisite of course:---

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
4	0	0	50	30	20	0	0

Contents : Unit	Topics	Contact Hours
Total Hours		

Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
Total Hours		

Textbook :

1 Mathematical Statistics, J. N. Kapoor & H. C. Saxena, S. Chand & Company, 2010

References:

1 Fundamentals of Statistics, Fundamentals of Statistics, A. M. Goon, M.K. Gupta and B. Dasgupta,, The World Press, 2013

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References:

2 Fundamentals of Statistics, Fundamentals of Statistics, A. M. Goon, M.K. Gupta and B. Dasgupta, The World Press, 2016

3 Statistical Methods, Statistical Methods, S. P. Gupta, Sultan Chand & Sons, 2012

4 Fundamentals of Mathematical Statistics, Fundamentals of Mathematical Statistics, S. C. Gupta & V. K. Kapoor, Sultan Chand & Company, 2020

Suggested Theory Distribution:

The suggested theory distribution as per Bloom's taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery and evaluation					
Remember / Knowledge	**Understand**	**Apply**	**Analyze**	**Evaluate**	**Higher order Thinking / Creative**
30.00	25.00	20.00	15.00	10.00	

Instructional Method:

1 The course delivery method will depend upon the requirement of content and need of students. The teacher in addition to conventional teaching method by black board, may also use any of tools such as demonstration, role play, Quiz, brainstorming, MOOCs etc.

2 The internal evaluation will be done on the basis of continuous evaluation of students in the laboratory and class-room.

3 Students will use supplementary resources such as online videos, NPTEL videos, e-courses, Virtual Laboratory.

Supplementary Resources:

1 https://www.coursera.org/courses?query=statistical%20analysis

2 https://www.edx.org/learn/statistics

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