

University of Mumbai



Phone – 68320000/731
E-mail -dr.aams@fort.mu.ac.in

Academic Authorities
Meetings & Services,
Room No.130, Fort Campus,
Mumbai – 400 032

AAMS/ICC/2023-24/ 331

Circular

All the Principals of the Affiliated Colleges and Recognized Institutions and Head/Directors of University Academic Departments are hereby informed that, as per the directives of Government of Maharashtra through the Steering Committee for Implementation of National Education Policy 2020 in Higher Education Institutions, NEP 2020 for UG Programs will be implemented from the Academic Year 2024-25.

We need to be ready for the same. University of Mumbai will require 2 Credits and 4 Credits Courses to be offered as Major, Minor, Open Electives, Skill Enhancement, Ability Enhancement and Indian Knowledge System courses. All of us can design various courses related to our subjects at various levels.

This will enable creation of the Baskets for all verticals to provide a wider choice to the students and multidisciplinary approach to learning. This will provide opportunity to present subjects at very different horizon – those who are opting as Major, they will study the subject in deep; those who are opting the course will understand on a wider conceptual level and open elective will be general interest of the student. More details of these can be availed from Prof R. D Kulkarni Committee Report. The same is available on University web site www.mu.ac.in NEP 2020 Tab. Let's us offer your subjects through various courses to all faculty students. One Rugvedic Rucha says

"आनो भद्र कृतवो यंतु विश्वतः"

"Let all auspicious, unobstructed, favorable and
victorious knowledge comes to us from all sides."

Let's prepare various courses for your subjects to be included in Baskets.

As directed by the Hon'ble Vice-Chancellor, you are requested to create a team with Professors (with minimum 5 years Experience) and others teachers. The team be requested to create the draft Courses of 2 and 4 credits and submit through the Principal of college for consideration of Board of Studies, University of Mumbai in that concerned subject on or before - 10th October, 2023 to the respective email addresses email ID.(humanities@aaau.mu.ac.in, science@aaau.mu.ac.in, commerce@aaau.mu.ac.in, ids@aaau.mu.ac.in) doc file, pdf file, English- Arial, 12 fount size and Marathi - Kruti Dev-55, 16 fount size, send one hard copy to Deputy Registrar ,Academic Authorities Meetings & Services, Room No.130, first Floor, University of Mumbai Fort , Mumbai-400032.

The Template of the course and illustration is attached herewith,

Mumbai – 400 032
Date – 05th October , 2023


(Prof. Sunil Bhirud)
I/c. REGISTRAR

University of Mumbai

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**Academic Authorities
Meetings & Services,**
Room No.130, Fort Campus,
Mumbai – 400 032

To,

The Principals of the Affiliated Colleges and Recognized Institutions and
Head/Directors of University Academic Departments.

AC –
Item No. –

As Per NEP 2020

University of Mumbai



Title of the Course _____

Syllabus for Two credit or four credit Course

From the academic year- _____

Name of the Course: _____

Sr. No.	Heading	Particulars
1	Description the course : Including but Not limited to :	Introduction, relevance, Usefulness, Application, interest, connection with other courses, demand in the industry, job prospects etc.
2	Vertical :	Major/Minor/Open Elective /Skill Enhancement / Ability Enhancement/Indian Knowledge System (Choose By $\sqrt{\quad}$)
3	Type :	Theory / Practical
4	Credit:	2 credits / 4 credits (1 credit = 15 Hours for Theory or 30 Hours of Practical work in a semester)
5	Hours Allotted :	30 Hours / 60 Hours
6	Marks Allotted:	50 Marks/100 Marks
7	Course Objectives: (List some of the course objectives) 1. 2. 3.	
8	Course Outcomes: (List some of the course outcomes) 1. 2. 3.	

<p>9</p>	<p>Modules:- Per credit One module can be created</p>
	<p>Module 1:</p>
	<p>1. 2. 3. 4.</p>
	<p>Module 2:.....</p>
	<p>1. 2. 3. 4.</p>
	<p>Module 3:.....</p>
	<p>1. 2. 3. 4.</p>
	<p>Module 4:.....</p>
<p>1. 2. 3. 4.</p>	
<p>10</p>	<p>Text Books: 1. 2. 3. 4.</p>

11	Reference Books: 1. 2. 3. 4.	
12	Internal Continuous Assessment: 50%	Semester End Examination : 50%
13	Continuous Evaluation through: Quizzes, Class Tests, presentation, project, role play, creative writing, assignment etc.(at least 3)	
14	Format of Question Paper: for the final examination	

Signatures of Team Members

Sr.No	Name	Signature
1.		
2.		
3.		
4.		
5.		

Illustration

Name of Course: Basic Statistics

Description of the Course:

Including but not limited to: Introduction, relevance, Usefulness, Applications, interest, connection with other courses, demand in the industry, job prospects etc.

The course is an elementary course in Statistics that forms the foundation of Data Analysis, Data Analytics and Research also. It is useful to all types of Numerical analysis. Any research or project is incomplete without data analysis. The industry is now data driven; this course will create interest in analysis of data and help look at the data objectively. It is decision support system that will enhance quality of decision making.

Vertical: Major ✓/ Minor ✓/ Open Elective✓/ Skill Enhancement✓/ Ability Enhancement/
Indian Knowledge System (Choose by ✓)

Type: Theory ✓

Credit: 2 Credits

Hours allotted: 30 Hours

(1 credit= 15 Hours for Theory or 30 Hours of Practical work in a semester)

Marks Allotted: 50 Marks

Course Objectives: (List some of the course objectives)

1. To understand various tools used for data analysis
2. To Provide understanding of statistical techniques
3. To calculate and apply the probability concepts
4. To compute various quantities in models and draw conclusions for decision making

Course Outcomes: (List some of the course outcomes)

Student will be able to

1. Compute various measures of Central Tendencies, dispersion, correlation, regression, probabilities
2. Apply the concepts to decision making in data analysis
3. Analyse the data for given objectives in situation
4. Evaluate the problem situation and create data sets to analyse and conclude

Modules:- (*Per credit One Module can be created*)

Module 1: Measures of Central Tendency ad Dispersion (10 Hours)

1. Introduction to Statistics, Concepts of Population, Sample, various types of Data,

2. Introduction to Sampling, concept of Parameter and Statistic, frequency table
3. Data Representation:- scatter plot, line diagram, bar diagram, pie chart, variations of bar diagram, Stem and tree Diagram, ogives
4. Central Tendency measure: Computational Measures- Arithmetic Mean, Geometric Mean, Harmonic Mean, Locational Measures- Median and Mode, use and limitations of all measures, fractiles- quartiles, deciles, percentiles and their use
5. Measures of Dispersion:- Range, Quartile Deviation, Mean Deviation, Standard Deviation, Variance, Semi Variance, Coefficient of Variance
Use of Spread Sheets for performing all the above

Module 2: Probability and Probability Distributions (20 Hours)

1. Concept of Probability, approaches to Probability- A priory, statistical, subjective, Axioms, Addition rule, Multiplication rule, Types of Probability- Marginal, Joint , Conditional, Computation of probability using:- Venn Diagram, Combinations, Complement, Bayes' Theorem
2. Concept of Random variable and Probability Distribution, Probability Mass Function and Probability Density Function, Binomial, Poisson, Normal Distribution, using these distributions in different decision making situations
Use of Spread Sheets for performing all the above
3. Correlation and Regression analysis- scatter diagram, types of relationship- direct, inverse, linear, non-linear, covariance, Karl Pearson's Correlation coefficient, properties of Correlation coefficient, impact of change of origin and scale on coefficient, Spearman's Rank Correlation coefficient, simple regression, determination of lines of regression, properties of regression lines, use in forecasting, Use of Spread Sheets for performing all the above
4. Hypotheses- Null and Alternative, type I error, Type II error, degrees of freedom, level of significance, acceptance and rejection region, one tailed and two tailed tests, Use of Chi Square test, t test and Z test for value of population mean and equality of Population means, Z test for value of population proportion and equality of Population Proportions
Use of Spread Sheets for performing all the above

Text Book:

Statistics for Management: Richard Levin and David Rubin, Prentice Hall of India, Seventh Edition

Reference Books

Statistics for business and economics by Anderson Sweeney Williams, Cengage Learning, 14th Edition.

Internal Continuous Assessment: 50%

Semester End Examination: 50%

Continuous Evaluation through (25 Marks)

Quizzes, Class Tests, presentation, project, role play, creative writing, assignment, Journal etc. (atleast 3)

Format of Question Paper for the Final Examination: - (25 Marks)

Solve Any 5 question out of Given 7 Questions

Questions are application oriented, to evaluate whether the learner is able to understand, able to calculate and able to conclude from the results.

Signature of the Team

S. No	Name	Mobile Number	Signature
1.	Kavita Laghate	9969624426	