

S-01 & 02 June, 2016 AC after Circulars from Circular No.100 & onwards+ - 39 -
DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY

CIRCULAR NO. SU/Service Course/30/2016

It is hereby inform to all concerned that, the Choice Based Credit and Grading System have been implemented to the affiliated colleges from the academic year 2015-16 at Post Graduate level for the all Faculties. According to the guidelines of C.B.C. & G.S. it is essential to teach the Service Course to students. The authorities of the university has decided that the service courses run at University Campus and Sub-Center, Osmanabad be apply to the college level. The concerns are inform that to instruct to the students to Choice any one Service Course as per their willingness. Where only one post graduate course they can take the service course of the concerned subject. The syllabi of the service courses are uploaded with the circular on the University website www.bamu.ac.in

The service courses be teach to the students with the **syllabus of IVth-Semester for this year only and hereafter** to tech with the syllabus of III-Semester as per their relevant courses.

This is effective from the academic year 2016-17.

All concerned are requested to note the contents of this circular and bring notice to the students, teachers and staff for their information and necessary action.

University Campus,
Aurangabad-431 004.
REF.NO. SU/SERVICE COURSE /
SYLLA./2016/5117-516
Date:- 02-09-2016.

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Director,
Board of College and
University Development.

Copy forwarded with compliments to:-

**1] The Principals of concerned Colleges,
Dr. Babasaheb Ambedkar Marathwada University.**

Copy to :-

- 1] The Controller of Examinations,
 - 6] The Section Officer, [M.A. Unit],
 - 7] The Section Officer, [M.Sc. Unit],
 - 8] The Section Officer, [M.Com. Unit],
 - 9] The Section Officer, [Management Unit],
 - 10] The Section Officer, [Professional Unit],
 - 11] The Section Officer, [Engineering Unit],
 - 3] The Programmer [Computer Unit-1] Examinations,
 - 4] The Programmer [Computer Unit-2] Examinations,
 - 5] The Public Relation Officer,
 - 6] The Co-ordinator, E-Suvidha Kendra, [Rajarshi Shahu Maharaj Pariksha Bhavan,
 - 7] The Record Keeper.
- Dr. Babasaheb Ambedkar Marathwada University,
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**D.R. BABASAHEB AMBEDKAR
MARATHWADA UNIVERSITY,
AURANGABAD.**



M.Sc. Statistics

Service Course

[Academic Year 2016-17 & onwards]

STA-507: STATISTICAL METHODS (SERVICE COURSE)

SEM: III

Max.Marks: 100

Credits : 04

Unit-I: Statistical Measures : Measures of central tendency : Arithmetic Mean, Geometric Mean, Harmonic Mean, Median and Mode; Measures of Variation : Range, Mean Deviation, Standard Deviation, Coefficient of Variation, Quartiles, Percentiles, Measures of Skewness and Kurtosis. Types of data: Qualitative and Quantitative data. Scale of Measurements (Nominal, Ordinal, Interval and Ratio) (12 L)

Unit-II: Probability and Distributions: Concept of Probability, Laws of Probability (Statements only); Random Variable; Probability Distributions: Binomial, Poisson and Normal distributions (properties and applications). (12 L)

Unit-III: Sampling Techniques: Concept and definitions, Types of sampling: Purposive and Random Sampling, Methods of selecting random numbers. Simple Random Sampling, Stratified Random Sampling and Systematic Random Sampling. (12 L)

Unit- IV : Tests of Significance : Basic concepts; Types of Hypothesis, Types of Error, Critical Region; Large sample tests for proportions and means; small sample tests; Application of t, chi-square, F-tests; Non-Parametric Test : Wilcoxon Signed Rank Test, Median Test and Mann-Whitney U-Test. (12 L)

Unit-V: Correlation and Regression. Types of Correlation, Simple Correlation, Karl Pearson's Correlation, Multiple Correlation and Partial Correlations, Properties of Correlation Coefficient, Test of Significance of Correlation Coefficient. Regression: Regression Coefficient, Properties of Regression Coefficient, Fitting of Regression Curve (Linear and Non-linear), Multiple Regression, Coefficient of Multiple Determination (R^2), Stepwise/Step down Regression Analysis. (12 L)

Text Books:

- 1) Gupta S.C. and Kapoor V.K. (2010): Fundamentals of Mathematical Statistics, Sultan Chand and Sons , New Delhi.
- 2) Gupta S.P. (2006): Statistical Methods, Sultan Chand and Sons , New Delhi.
- 3) Rao, C. R. (1973): Linear Statistical Inference and its Applications , A Wiley – Inter science Publications , JOHN WILEY & SONS, INC.

Reference Books:

- 1) Gupta S.C. and Kapoor V.K. (2010): Fundamentals of Applied Statistics, Sultan Chand and Sons, New Delhi.
- 2) Richard B. Ellis(1975): Statistical Inference Basic Concepts, Prentice-Hall, Inc., Englehood Cliffs, New Jersey.
- 3) E.L. Lehmann (1966): Testing Statistical Hypotheses, New York. John Wiley & Sons, Inc., London, Sydney.