

Pravara Institute of Medical Sciences (Deemed to be University)

University Established under section (3) of UGC Act
NAAC Re-accredited with 'A' Grade (CGPA 3.17)

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- RURAL MEDICAL COLLEGE
- RURAL DENTAL COLLEGE
- DR. APJ ABDUL KALAM COLLEGE OF PHYSIOTHERAPY
- COLLEGE OF NURSING
- CENTRE FOR BIO-TECHNOLOGY
- CENTRE FOR SOCIAL MEDICINE
- PRAVARA RURAL HOSPITAL

Ref. No.

Date :

Ref.: PIMS/R/Ph.D/2019/55

Date: 09/01/2019

NOTIFICATION NO. 01 / 2019

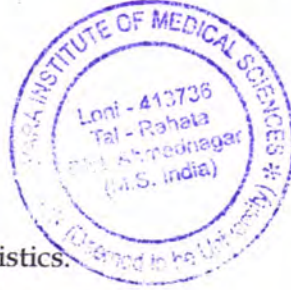
Subject: Syllabus of Biostatistics for Pre Ph.D. Course Work

As per the revised UGC Regulations 2009, 2016 & 2017 "Minimum Standards and Procedure for Award of Ph.D. Degree Rules & Regulation 2018, dated 3rd August, 2018.

University authorities approved the Syllabus of Biostatistics for Pre Ph.D. Course, w.e.f. 2018 admission batch.

It is hereby notified for implementation for all registered Ph.D. students of 2018 batch & all concerned Ph.D. guides & HOI's are hereby informed & instructed to implement the same.

Place : Loni
Date : 09/01/2019



Encl: Syllabus for Biostatistics.

Copy for information please to:

1. Hon'ble Pro-Chancellor, PIMS (DU), Loni
2. Hon'ble Vice-Chancellor, PIMS (DU), Loni

Copy for information & implementation to:

1. All the Ph.D. Candidates (2018) admission batch.
2. Dean & Principal - RMC, RDC, Dr.APJAKCOPT, CON, CSM, CBT.
3. All Dean's - Faculty of Medicine, Dentistry, Nursing & Allied Health Sciences
4. Registrar, PIMS (DU), Loni
5. Controller of Examinations, PIMS (DU), Loni
6. The Finance Officer, PIMS (DU), Loni
7. Mr. Hemant J. Pawar, Asso. Prof. & Co-ordinator, Dept. of Biostatistics & Health Informatics, RMC, Loni for their Course Work.
8. Manager IT, PIMS (DU), Loni - for display on Website PI.

Hemant J. Pawar

Registrar

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PRAVARA INSTITUTE OF MEDICAL SCIENCES
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Syllabus for Biostatistics for Pre Ph.D. Course

40 Hours

1. Introduction:-

- Biostatistics

2. Sources and Presentation of Data

- Statistical Data – Collection of data
- Methods of collection & Presentation
- Presentation or Illustration of Quantitative Data
- Presentation or Illustration of Qualitative Data

3. Measures of Location- Average and Percentiles

- Measures of Central Tendency- Averages
- Measures of Location- Percentiles

4. Variability and its Measures

- Types of Variability
- Measures of Variability

5. Normal Distribution and Normal Curve

- Demonstration of a Normal Distribution
- Normal Curve
- Relative or Standard Normal Deviate or Variate
- Asymmetrical Distribution
- Further Notes on Normal Probability Distribution
- Problems on Normal Probability Distribution.

6. Sampling

- Sample Characteristics
- Sampling Techniques

7. Probability (Chance)

- Laws of Probability
- Further Notes on Probability

8. Sampling Variability and Significance

- Hypothesis Testing
- Significance
- Tests of Significance

9. Significance of Difference in Means

- Standard Error of Mean (SEX)
- Standard Error of Difference between two Means of Large Samples - Z test
- Significance of Difference between Means of Small Samples by Student's t- Test

10. Significance of Difference in proportions of Large Samples – Z test

- Standard Error of Proportions (SEp)

11. The Chi- square Test

- Application of Chi- square
- Calculation of X^2 Value

12. Correlation and Regression

- Measures of Relation-ship between continuous Variables
- Types of Correlation
- Calculation of Correlation Coefficient from Ungrouped Series
- Calculation of Correlation Coefficient from the Grouped Series
- Regression
- Calculation of Regression Coefficient
- Summary

13. Designing and Methodology of An Experiment or A Study

- Steps in Methodology and Designing
- Summary
- Presentation Briefs

14. Demography and Vital Statistics

- Collection of Demography Data
- Medical Certification of the Case of Death
- Compilation and Presentation

15. Measures of Population and Vital Statistics

- Measures of Population
- Measures of Vital Statistics

16. Computers in Medicine

- Application in Methods in Biostatistics
- Application in Community or Public Health Care and Management
- Application of Computers in Hospital Establishments, Nursing Homes and Clinics of Academic General Practitioners
- Computers in Research

17. Computer Application in Biostatistical Analysis: An SPSS Manual

- Starting SPSS
- To Open Data Files
- To Obtain Frequency Table

Suggested Books

P. Armitage – Statistical methods in Medical Research

H. Bancroft – Introduction to Biostatistics

D.B. Bisht – Basic principles & Medical Research

Dr. B. K. Mahajan – Test book of Biostatistics by Jaypee Publications

D. Mainland – Elementary Medical Statistics

Khanal A.B. – Mahajan's Methods in Biostatistics, Jaypee Publications, New Delhi, Ed.
8th

- Mahajan's Methods in Biostatistics for Medical students and Research workers
(8th edition)

Ed. A. K. Khanal

Jaypee Brothers Medical Publishers (P) Ltd.,
New Delhi.

- Biostatistics
A manual of statistics methods for use in health, Nutrition and Anthropology
(2nd edition)

Ed. K. Viswaswara Rao

Jaypee Brothers Medical Publishers (P) Ltd.,
New Delhi.

- Research Methods by

Ram Ahuja

Rawat Publications

Jaipur

- Biostatistics in Clinical Trials

Ed. Carol Redmond

Theodore Colton

John Wiley & Sons Ltd, England

- Lawanga's Test Book of Biostatistics by WHO

