



**BHARATI VIDYAPEETH (DTU) MEDICAL COLLEGE PUNE**  
**Biostatistics Unit, Department of Community Medicine**



*Certificate course in “Biostatistics in Medical Research”*

**Registrations open for Batch-III**  
**Batch starts from 2<sup>nd</sup> January 2021**

The collage features a central word cloud with terms like 'Biostatistics', 'data', 'statistics', 'analysis', and 'models'. To the right, a doctor in a white coat uses a magnifying glass to inspect a large '75%' figure. Below this is a grid of 15 different chart types: Area, Bar, Column, Line, Pie, Doughnut, Radar, XY (Scatter), Combination, 3-D Area, 3-D Bar, 3-D Column, 3-D Line, 3-D Pie, and 3-D Surface. At the bottom, a cartoon elephant is shown with a person on its back, accompanied by the quote: "Statistics: The only science that enables different experts using the same figures to draw different conclusions." - Evan Esar.

Biostatistics is well recognized as an essential tool in medical research, clinical research and health research. Biostatistics is the branch of statistics applied to biological areas or medical sciences or medical research. Biostatistics not only covers the health, medicine, and nutrition but also covers the agriculture, genetics, biology, biochemistry, demography, epidemiology, anthropology and many others. Biostatistics helps to evaluate many life and death issues in medicine. The aim of this certificate course is to educate the healthcare & allied professionals & students about the applications of biostatistics so that they are proper and accurate conclusions may be drawn from the study.

✓ Competencies –

After finishing this course participant will have knowledge and skills pertaining to-

- 1) Tabular and graphical presentation of data.
- 2) Data cleaning, data validation, normality of data.
- 3) Decision and application of appropriate statistical test on different types of data.
- 4) The concept of statistical analysis and interpretation of data.
- 5) Participants will be introduced statistical software's like SPSS & STATA.

Course Design	Certificate Course in Biostatistics in Medical Research
Course Duration	48 Hours (2 <sup>nd</sup> January-2021 to 20 <sup>th</sup> March-2021)
Days & Timing	Every Saturday (Half day-04hrs)-01:00pm -05:00 pm
Eligibility Criteria (Basic Qualification)	M.B.B.S./B.D.S./B.P.T./B.A.M.S./B.H.M.S./B.Sc./Any Graduate
Methodology of Course	Theory Lectures + Practical With Hands on Microsoft Excel
Evaluation	Written Examination (Theory + Practical)
Intake Capacity	20
Fees Structure	Rs-10,000 (One time) + 1000 exam fee
Certification by	Bharati Vidyapeeth (Deemed to be University), Pune
Course run by	Biostatistics Unit, Department of Community Medicine, Bharati Vidyapeeth (DTU) Medical College, Pune
Last Date of Registration	26 <sup>th</sup> December 2020
Faculty	<ul style="list-style-type: none"> <li>○ Mr. R B Deshmukh (M. Sc. Statistics)</li> <li>○ Mr. K H Patil (M. Sc. Statistics, MPH)</li> <li>○ Mr. J R Patil (M. Sc. Statistics)</li> </ul>

## **Theory & Practical Sessions (4 hours each)**

01. Data, data sources, data types, scale, measurement of scales, tabulation & graphical presentation of data, hands on sessions on graphical presentation
02. Descriptive statistics, measure of central tendency, measure of dispersion, coefficient of variations, hands on sessions on measure of central tendency & dispersion
03. Probability and its distributions, normal distributions & its characteristics, examples of probability and normal distributions.
04. Introduction to sampling, sampling techniques, probability & non probability sampling,
05. Study Design, Sample size estimation with their examples
06. Testing of hypothesis, hypothesis, null, alternative, One-sided, two-sided hypothesis, level of significance, Type-I, type-II error, power of test.
07. Parametric test: t-test- one sample, paired, intendent t-test hands on session on these test.
08. Parametric test: One sample, 2-sample proportions test, hands on session on these test.
09. Non-Parametric test: Chi-square, sign rank test, median test, Mann Whitney test, hands on session on these test.
10. Non-Parametric test: Chi-square & Fishers exact test, hands on session on these test.
11. Measure of relationship, correlation, rank order correlation, hands on session on correlation & Confidence interval, Regression Analysis.
12. Revision

### Distribution of Hours:

- 24 hours – For Theory lectures
- 24 hours – For Practical & Hands on Sessions

### Eligibility for exam:

- 80 % attendance & 50 % marks in all assignments.

### Exam Pattern:

- Weekly Assignments – 5 marks/Assignment (total 10 assignments)
- Final Theory examination – 50 marks
- Final Practical Examination - 50 marks
- For Passing 50% marks are essential (At least 40% marks are essential in each head of practical & theory)
- In case, candidate does not secure desired marks in final examination, supplementary examination will be conducted after 4 weeks. Those who do not clear in this supplementary exam will appear with next batch examination.

To register for the course use following link.

- <https://forms.gle/YV9so627w8oAmTLE8>

### **Contact Details:**

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