



COURSE SYLLABUS & FEES · 2026

Certificate Course in Biostatistics (CCBS) in Pune

iLearn CRI's 3-month Biostatistics course in Pune covers statistical theory, study design, hypothesis testing, regression, and hands-on SAS, R, and SPSS training for clinical and health research careers.

DURATION	MODE	FEES	EMI
3 months	Live online & classroom (Pune)	₹25,000 + 18% GST	Available

Eligibility

B.Sc / M.Sc in Statistics, Mathematics, or Life Sciences
B.Pharm, M.Pharm graduates
B.Sc / M.Sc in Biotechnology, Bioinformatics, or related fields
Graduates with mathematics or statistics background at 10+2 or degree level

Complete syllabus, module by module

01 Introduction to Biostatistics & Study Design

Role of biostatistics in clinical research and health sciences
Types of clinical studies: observational vs experimental
Study design principles: controls, randomisation, blinding
Sample size determination and statistical power calculations
Protocol statistical sections and analysis plan overview

02 Research Types & Methodology

Descriptive, analytical, and interventional research designs
Cross-sectional, cohort, case-control, and RCT designs
Bias types: selection bias, information bias, confounding
Systematic reviews and meta-analysis overview
Epidemiological measures: incidence, prevalence, relative risk, odds ratio

03 Foundations of Statistical Theory

Statistical terminology and measurement scales
Population vs sample: parameters and statistics
Statistical estimation: point and interval estimates
Normal distribution and the Central Limit Theorem
Confidence intervals and their clinical interpretation

04 Data Types, Data Organization & Data Visualization

Data types: continuous, categorical, ordinal, nominal
Data collection instruments and coding schemes
Frequency tables, crosstabulations, and data validation
Graphical displays: histograms, box plots, scatter plots, bar charts
Handling missing data and data cleaning principles

05 Descriptive Statistics

- Measures of central tendency: mean, median, mode
- Measures of dispersion: variance, standard deviation, IQR, range
- Skewness, kurtosis, and distribution shape
- Percentiles and quartiles
- Summary statistics reporting in clinical research format

06 Probability & Sampling

- Probability theory: basic rules and conditional probability
- Probability distributions: binomial, Poisson, normal
- Sampling techniques: simple random, stratified, cluster
- Sampling error and precision
- Randomisation methods in clinical trials

07 Statistical Inference & Hypothesis Testing

- Null and alternative hypotheses: Type I and Type II errors
- p-value, significance level, and statistical power
- t-tests: one-sample, independent samples, and paired
- Chi-square test and Fisher's exact test
- ANOVA: one-way and two-way analysis of variance
- Non-parametric tests: Mann-Whitney U, Kruskal-Wallis, Wilcoxon signed-rank

08 Regression & Advanced Analysis

- Simple and multiple linear regression
- Logistic regression for binary outcomes
- Survival analysis: Kaplan-Meier curves and log-rank test
- Cox proportional hazards model
- Correlation: Pearson and Spearman coefficients
- Repeated measures and longitudinal data overview

09 Statistical Software & Proficiency

- SAS: PROC MEANS, PROC FREQ, PROC TTEST, PROC LOGISTIC hands-on
- R: data manipulation with dplyr, visualisation with ggplot2, statistical functions
- SPSS: data entry, descriptive analysis, and hypothesis testing workflows
- Hands-on datasets from clinical trial and public health scenarios
- Interpreting and presenting software output for clinical reports

10 Corporate Etiquette, Aptitude & Communication Skills

- Professional communication in clinical research environments
- Statistical reporting for non-statistical audiences
- Quantitative aptitude and logical reasoning for placement tests
- Resume preparation for biostatistics and data analysis roles
- Mock interviews and technical assessment preparation

Career outcomes

ROLE	AVERAGE CTC
Biostatistician (Trainee)	₹ 3.5–4.5 LPA
Statistical Programmer	₹ 4.0–6.0 LPA
Data Analyst (Clinical)	₹ 3.8–5.5 LPA
Research Analyst	₹ 3.5–4.5 LPA
Senior Biostatistician (3–5 yrs)	₹ 8.0–14.0 LPA

Placement support built in

100% placement assistance for every student: resume calibration, mock interviews with practicing professionals, and direct introductions to 50+ pharma & CRO hiring partners. Average starting CTC across placements: ₹4.2L. Separate live online and classroom batches — same curriculum, same fees, same support.

Apply / ask a question: WhatsApp +91 80559 86767 · info@ilearncri.com · ilearncri.com/admissions/

iLearn Clinical Research Institute · Office No. 331, Metro Life Bizzbay Tathawade, Wakad, Maharashtra 411057 · Fees and batch details current as of August 2026; confirm with admissions before enrolling.