

# Certificate Course in Advanced Biostatistics

Duration: 12 Weeks

Level: Advanced

Eligibility: Completion of Fundamentals course or equivalent knowledge

Course Objectives:

- Apply advanced statistical models to health and biomedical data
- Critically evaluate and conduct statistical analyses in health research
- Build competency in interpreting complex data scenarios

Weekly Course Outline:

Week 1: Review of Core Concepts

Week 2: Multivariable Linear Regression

Week 3: Logistic Regression

Week 4: Survival Analysis I

Week 5: Survival Analysis II

Week 6: Repeated Measures and Mixed Models

Week 7: Generalized Linear Models (GLM)

Week 8: Meta-Analysis

Week 9: Advanced Epidemiologic Methods

Week 10: Handling Missing Data

Week 11: Statistical Reporting and Interpretation

Week 12: Capstone Project