



**DEPARTMENT OF STATISTICS  
UNIVERSITY OF MUMBAI**

**Offers**

**Certificate Course in  
Data Analysis using SPSS Software**

**Duration: Six Month**

**Eligibility: Graduate from any stream  
(12<sup>th</sup> Standard Mathematics Required )**

**Last Date of submission of Application form: 1<sup>st</sup> August, 2022.**

**Total Seats: 30**

**Fees: Rs. 10800/-**

**For details visit following address**

**Address: Department of Statistics  
Second floor, Tilak Bhavan  
Vidyanagari Campus  
Santacruz (east) Tel: 022-26533710**

**Head  
Dr.V.U.Dixit**

**Website: [www.mu.ac.in](http://www.mu.ac.in)**

**Admission link :**

**<https://parttimecourses.mu.ac.in>**

**Certificate course will be conducted on either Saturday or Sunday from 10 am to 3pm.**

Detailed syllabus for the course.

Sr.no.	Title	Content of Syllabus
1	Introduction	<p>Type of Scale of Measurements, Choosing appropriate scale and measurement to the data, Preparing codebook.</p> <p>Getting to Know SPSS: Starting SPSS, Working with data file, SPSS windows, Menus, Dialogue boxes.</p> <p>Preparing the Data file: Creating data file and entering data, Defining the variables, Entering data, modifying data file, import file.</p> <p>Screening and cleaning data, Manipulation of data.</p>
2	Preliminary Analysis	<p>Descriptive statistics: Categorical variables, continuous variables, checking normality, outliers checking.</p> <p>Choosing the right statistics: Overview of different statistical techniques, Decision making process.</p>
3	Statistical techniques: Explore relationship among variables	<p>Correlation: Pearson product moment correlation, Spearman rank correlation, Partial correlation, Simple linear regression,</p> <p>Multiple Linear Regression: Assumptions, overall significance, multicollinearity, Variable selection methods.</p>
4	Statistical techniques: Compare means	<p>One sample and two Independent sample t test, Paired sample t test, One way Analysis of variance, Two way ANOVA, Multivariate ANOVA, Analysis of Covariance, Repeated measures .</p>

5	Non-Parametric statistics	Independent Chi square Test, Mann- Whitney test , Wilcoxon signed rank test, Kruskal- Wallis test.
6	Advanced Models: Multivariate statistical techniques.	Logistic Regression and Discriminant Analysis, Factor Analysis, Cluster Analysis.