



**माँ विन्ध्यवासिनी विश्वविद्यालय, मीरजापुर**

**Maa Vindhyavasini University, Mirzapur**

Website: <http://mvvu.ac.in>.

e-mail : [reg.mvvu@gmail.com](mailto:reg.mvvu@gmail.com)

## **Mapping of Various Issues**

### **Minor Course In statistics**

<i>Issues</i>	<i>Course</i>
<b>Entrepreneurship and Innovation</b>	<b>ISDA 1, ISDA 2</b>
<b>Skill Development</b>	<b>ISDA 1, ISDA 2</b>
<b>Employability</b>	<b>ISDA 1, ISDA 2</b>
<b>New Course</b>	<b>ISDA 1, ISDA 2</b>

*“Minor Course In statistics provides tool, which plays pivotal role in expanding the horizon of knowledge. Hence it is used by almost every discipline and as such cater every type of needs from local to global.”*

*The proposed Minor Course In statistics course is CBCS and based on NEP 2020 and effective from Session 2020-21.*

## **:: Course Outcomes ::**

After completing this course, a student will have:

- ✓ Knowledge of Statistics, its scope and importance in various fields.
- ✓ Ability to understand concepts of sample vs. population and difference between different types of data.
- ✓ Knowledge of methods for summarising data sets, including common graphical tools (such as boxplots, histograms and stemplots). Interpret histograms and boxplots.
- ✓ Ability to describe data with measures of central tendency and measures of dispersion.
- ✓ Ability to understand measures of skewness and kurtosis and their utility and significance.
- ✓ Knowledge of the method of least squares for curve fitting to theoretically describe experimental data with a function or equation and to find the parameters associated with the model.
- ✓ Knowledge of the concepts of correlation and simple linear regression and Perform correlation and regression analysis.
- ✓ Ability to interpret results from correlation and regression.
- ✓ Ability to compute and interpret rank correlation. .
- ✓ Ability to understand concept of qualitative data and its analysis.

### **Minor Course in Statistics**

#### **ISDA 1: Introduction to Statistical Data Analysis-I**

##### **Unit I:**

Concept of statistical population, Attributes and variables (discrete and Continuous). Primary data – designing a questionnaire and schedule, collection of primary data and Secondary data.

##### **Unit II:**

Presentation of data: classification, tabulation, diagrammatic & graphical representation of data. Frequency distributions, cumulative frequency distributions and their graphical representations, histogram, frequency polygon, frequency curve and ogives.

##### **Unit III:**

Measure of central tendency and dispersion, merits and demerits of these measures.

##### **Unit IV:**

Moments and factorial moments. Shephard's correction for moments, Skewness, Kurtosis and their Measures.

***No. of Credit: 4***

***Weekly Classes: 4 Theory including exercise 60 hours***

#### **References**

1. Charles Wheelam: "*Naked Statistics*" W. W. Norton & Company.
2. Darrell Huff: "*How to Lie with Statistics*" W. W. Norton & Company.
3. Goon, Gupta & Dasgupta: "*Fundamentals of statistics Vol. I*" The World Press Private Ltd., Calcutta.
4. Yule, G.U. and Kendall, M.G.: "*An Introduction to the theory of statistics*" Charles Griffin & Company Ltd.
5. C. E. Weatherburn: "*Mathematical Statistics*"

## **ISDA 2: Introduction to Statistical Data Analysis-II**

### **Unit I:**

Bivariate data, Method of least squares for curve fitting. Correlation and regression, rank Correlation (Spearman's and Kendall's measure).

### **Unit II:**

Intraclass correlation, correlation ratio. Partial and Multiple Correlation & Multiple Regression for trivariate data.

### **Unit III:**

Attributes- Notion and terminology, contingency table, class frequencies and ultimate class frequencies, consistency.

### **Unit IV:**

Association of attributes, Independence, Measure of association for 2x2 table. Chi-square, Karl Pearson's and Tschuprow's coefficient of association.

***No. of Credit: 4***

***Weekly Classes: 4 Theory including exercise 60 hours***

### **References**

1. Charles Wheelam: "*Naked Statistics*" W. W. Norton & Company.
2. Darrell Huff: "*How to Lie with Statistics*" W. W. Norton & Company.
3. Goon, Gupta & Dasgupta: "*Fundamentals of statistics Vol. I*" The World Press Private Ltd., Calcutta.
4. Yule, G.U. and Kendall, M.G.: "*An Introduction to the theory of statistics*" Charles Griffin & Company Ltd.
5. C. E. Weatherburn: "Mathematical Statistics"