# M. G. Science Institute, Ahmedabad

**Autonomous | Affiliated to Gujarat University, Ahmedabad**

**(Managed by The Ahmedabad Education Society)**

**Department of Statistics**

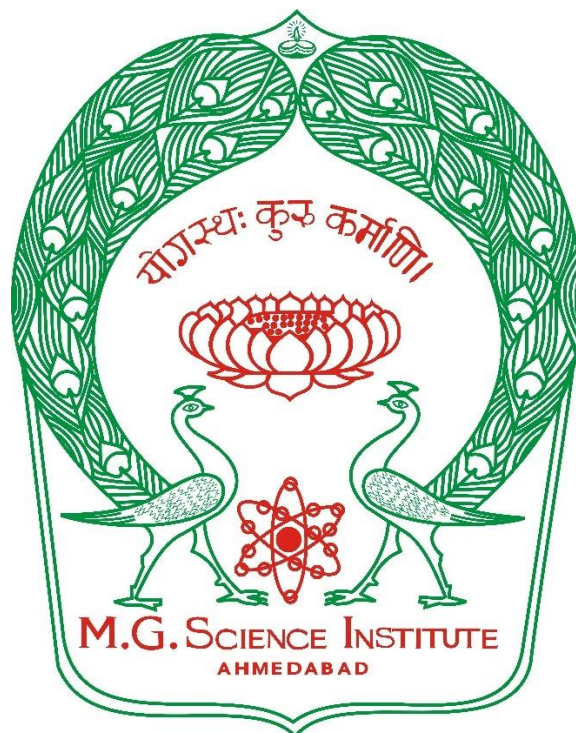**Bachelor of Science (Hons.) in Statistics**

**B.Sc. (Hons.) Statistics**

**4 Year, 8 Semester Full-Time Programme**

**Choice Based Credit System (CBCS) & Grading System**

**Outcome-Based Education Pattern**

**(Effective from Academic Year 2024-25)**

B. Sc. Sem I Statistics

**Detailed Syllabus for STSEC116 Essential Excel Skills for Data Science**

| Semester: I | Course Title: Essential Excel Skills for Data Science | Credit: 2 |
|---|---|---|
| Course No.: STSEC116 | | Hours: 2/week |

**Course Outcomes: On successful completion of the course the learner will be able to**

| CO | COGNITIVE ABILITIES | COURSE OUTCOMES |
|---|---|---|
| CO 1 | REMEMBERING | Remember Excel shortcuts |
| CO 2 | UNDERSTANDING | Understand Excel formulas (relative and absolute). Understand basic functions of Excel. |
| CO 3 | APPLYING | Describe the sample data with suitable Excel functions like sum, average, median, var, stdev, etc. |
| CO 4 | ANALYSING | Analyze the sample data from various domains using Excel. |
| CO 5 | EVALUATING | Summarize the data using suitable charts and graphs. Summarize the data using Excel basic functions. |
| CO 6 | CREATING | Students can visualize the data graphically and summarize the data numerically for real-life data analysis problems. |

| | PSO 1 | PSO 2 | PSO 3 | PSO 4 | PSO 5 |
|---|---|---|---|---|---|
| CO 1 | 2 | 1 | 1 | 1 | |
| CO 2 | 2 | 1 | | 1 | |
| CO 3 | | 2 | 3 | | |
| CO 4 | 1 | 1 | 2 | 2 | 1 |
| CO 5 | 1 | 1 | 2 | 1 | |
| CO 6 | 1 | 1 | 2 | 3 | 1 |

| Unit | Detailed Syllabus | No. of Hours of Teaching |
|---|---|---|
| I | **Introduction to MS Excel**<br>• Importance of MS Excel. Understand workbooks and worksheets. Entering and editing data. Formatting cells. Creating and managing cell styles. Formatting numbers and labels.<br>• Editing worksheet and cells. Add, edit, and delete comments. Lock and protect cells.<br>• Enter basic formulas. Absolute and relative references. Basic functions.<br>• Working with range names.<br>• Create charts and graphs. Format charts and graphs.<br>• Filtering, sorting, and conditional formatting<br>• Calculations and functions: sum, average, min, max, and, or, not, if | 15 |
| II | **Practical Based on Unit-I**<br>1. Understanding spreadsheet elements. Data Entering and editing.<br>2. Basics of formulas in Excel. Relative and Absolute referencing.<br>3. Basic Functions in Excel. Working with range names.<br>4. Creating formatting Charts and graphs.<br>5. Use of various functions like sum, average, min, max, and, or, not, if<br>6. Filtering, sorting of the data<br>7. Use of conditional formatting. | 30 |

**Suggested Reference Books:**
1. Microsoft Excel: Data Analysis and Business Model, PHI, Wayne, WL, 2019.
2. Microsoft Excel Formulas and Functions Dummies, Ken Bluttman, 2020.