

# **Add-On Course on Microsoft Excel**

**Course Code: ADC-**

(Duration: 45 Hours)

Computer Science and IQAC, St. Xavier's College (Autonomous),  
Ranchi

For the Students of the  
college - Apply Now

<b>No. of seats:</b>	<b>50</b>
Course eligibility:	10+2 (intermediate)/ UG/PG (All the Departments of St. Xavier's College, Ranchi)
Requirement:	NA
Course Fee:	1500/- (including admission application form fee)
Timing:	2:10 PM (Flexible) (course completion duration- 45 Hrs spread over 03-04 months)
Course Coordinator:	Dr. Kamaldeep, Dept of Computer Science, St. Xavier's College, Ranchi
Course Registration through College website-	<a href="http://www.sxcra.ac.in">www.sxcra.ac.in</a>

## **About the course:**

This course aims to provide students with a comprehensive understanding of the fundamental concepts related to MS Excel. For students across all academic disciplines, learning Excel offers a range of significant benefits that extend well beyond the classroom. Mastery of Excel not only enhances academic performance but also provides a strong foundation for future career success. By the end of this course, students will be able to analyze data, identify patterns, and make data-driven decisions. These analytical skills are useful not only in academics but also in real-life problem-solving. Additionally students will complete assignments more efficiently. For example, they will be able to perform complex calculations quickly using formulas, create visual charts for reports, and track study progress or budgets. These capabilities help students deliver high-quality work, leading to better grades.

## **Course Objectives:**

1. Develop students' proficiency in using Microsoft Excel as a primary tool for data analysis, including data entry, manipulation, and organization.
2. Familiarize students with the Excel interface, including ribbons, menus, toolbars, and navigation techniques.

3. Develop students' ability to perform basic to intermediate data operations, including formatting, sorting, filtering, and conditional formatting.
4. Enable learners to apply a variety of built-in functions and formulas for mathematical, statistical, and logical calculations
5. Familiarize students with various data visualization techniques in Excel, including creating charts, graphs, and pivot tables to visually represent and explore data.
6. Introduce students to advanced Excel functions and tools for data analysis, such as IF statements, VLOOKUP, HLOOKUP, PivotTables, and statistical functions.

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

1. Students will be able to identify and use key components of the Excel environment including ribbon, tabs, formulas bar, and worksheets.
2. Students will be able to use basic and advanced formulas and functions.
3. Students will be able to create various types of charts, graphs, and pivot tables in Excel to visually represent and explore data, enhancing their ability to identify patterns, trends, and relationships within datasets.
4. Students will be proficient in using advanced Excel functions and features for data analysis, such as VLOOKUP, HLOOKUP, IF statements, and PivotTables, to efficiently manipulate and analyze data.
5. Students will be able to Organize and Manage Data such as Sort and filter data effectively, use data validation, conditional formatting, and remove duplicates.
6. Students will be able to apply Excel in real-world scenarios to analyze business or financial data and generate insightful reports.

**Course Content:**

Sl. No.	Topic	Hours
	<b>Theoretical Session (23 hrs = 30 periods)</b>	
<b>1.</b>	<b>Module 1: Introduction to Excel</b>	2 hrs
	Overview of Excel and its applications; Excel interface; Ribbon, workbook, worksheet, cells, rows, columns; Creating, Saving, Opening and Editing a Workbook/Worksheet; Inserting, Deleting Work Sheets; File types; Basic navigation and shortcuts.	
<b>2.</b>	<b>Module 2: Data Entry and Formatting</b>	2 hrs
	Entering data in a cell: Entering text, numbers, dates; Copying and Moving from selected cells; Autofill, flash fill, and custom lists; Formatting cells (font, color, borders, number formats); Merging cells; wrapping text; adjusting row/column sizes; Using themes and styles	
<b>3.</b>	<b>Module 3: Working with Worksheets</b>	2 hrs
	Renaming, moving, copying sheets; Find and Replace; Changing the size of rows and columns; Adding and deleting rows and columns; Inserting page breaks, Applying themes; Grouping and ungrouping sheets; Using hyperlinks between sheets; Protecting cells and sheets; Freezing panes.	
<b>4.</b>	<b>Module 4: Basic Formulas and Functions</b>	3 hrs
	Cell referencing: relative, absolute, mixed; Formulae and Functions; Handling operators in Formulae: Basic arithmetic operations: +, -, *, /; Functions: Mathematical, Logical, Statistical, Text, Financial, Date and Time functions.	
<b>5.</b>	<b>Module 5: Tables. Charts and Visual Data Representation</b>	3 hrs
	Creating and formatting Excel tables; Table features: headers, banded rows, totals row; Sorting and filtering tables; Basic structured references; Using Subtotal feature	

	Introduction to charts and graphs; Creating charts in excel; Modifying Charts; Types of Charts; Formatting Chart Objects; Customizing chart elements: Adding, Showing and Hiding the legend; Adding, Showing and Hiding the Data Table; Save a chart as a chart template; Introduction to Sparklines and data bars.	
<b>6.</b>	<b>Module 6: Conditional Formatting and Data Validation</b>	3 hrs
	Highlight cells rules (greater than, duplicate values, etc.); Change the format of cells depending on their value; Graphical Conditional Formats: Data bars, color scales, icon sets; Writing Conditional formatting Formulas; Data validation rules (drop-downs, text length, numbers)	
<b>7.</b>	<b>Module 7: Introduction to PivotTables, Lookup and What-if Analysis</b>	4 hrs
	Definition of Pivot Table; Key Features of Pivot Table; Creating PivotTables; Manipulating Pivot Table; Using the Pivot Table Toolbar; Changing Data Field of Pivot Table; Changing Properties of the Pivot Table; Displaying a Pivot Chart; Setting Pivot Table Options. Lookup & Reference: Looking up information in a basic table. Using VLOOKUP(), HLOOKUP() and INDEX()/MATCH() combination. What-If Analysis- Goal seek, Data Tables and Scenario Manager	
<b>8.</b>	<b>Module 8: Sorting, Filtering Data and Controlling the way users can enter data into a Spreadsheet</b>	4 hrs
	Sorting data (text, numbers, dates); Single-Level Sorting, Multi-Level Sorting, Custom Sort Order; Filtering Data; Controlling the Order of Precedence in a Sort; Advanced Filtering Controlling the way users can enter data into a Spreadsheet: Data Validation, Using Drop-down lists, Locking Cells and Protecting Worksheets.	
Sl no	Topic	Hours
	<b>Practical Session [24 hrs = 15X2 (30) periods]</b>	
<b>1.</b>	<b>Implementation of the topics taught in various modules through Hands-on Sessions in the Computer Labs</b>	24 hrs
Total no of Classes		<b>30 (Th) + 30 (Pr)</b>
Time		<b>2:10 pm (Flexible)</b>
Application		College website