

**Shaheed College of Business Studies, University of Delhi**

Grade “A+” Accredited by NAAC with a CGPA of 3.46

**Business Intelligence, Data Visualization and Automation**

*(Create a data-driven culture with business intelligence)*



**SHAHEED SUKHDEV COLLEGE OF BUSINESS STUDIES**

 **(UNIVERSITY OF DELHI)**

**Dr. KN Katju Marg, Sec-16, Rohini, Delhi-110089**

**About Course**:

Short duration Course on **“Business Intelligence, Data Visualization and Automation” -**75 hours (3-4 Months) weekend course launched by “Shaheed Sukhdev College of Business Studies (SSCBS): An esteemed college of University of Delhi”.

**Class timings:**

During the Weekends and Vacations.

**Duration of the course:**

75 Hours (over 3-4 Months).

**Eligibility**:

Anyone who is pursuing Graduation or passed class 12th or equivalent.

**Forms Availability:**

Admission form will be available on the college website (http://sscbsdu.ac.in). Download the Application form (photocopy of downloaded form may be used).

**Total Fees:**

**18,200/**-(Course fee 18,000/-, Application fee 200/-).

**Mode of Payment:** By Net Banking, Cheque, and Credit Card/Debit Card.

**Net Banking/ Cheque details:**

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| Account Name: | Principal SSCBS students Society A/C |
| Bank: | State Bank of India |
| Account Number: | 35810781108 |
| IFS Code: | SBIN0011550 |
| MICR: | 110002303 |
| Branch: | (11550)- Pascon Building Garg Trade Centre, Sector-11, Rohini, New Delhi-110085 |

Students need to deposit online transaction receipt of Total Fees 18,200/-(Course fee 18,000/-, Application fee 200/-) with application form and supporting documents.

**Documents required at the time of Admission**: Attach Photocopy of Mark sheet & Certificates of Class 12th or above, Online Fees Deposit Receipt (If fees paid online) and Aadhar card / Identity Proof.

**Timings of Application form submission in the college**: Forms will be submitted in Room No-103 Monday to Friday during working Hours (10:00 am to 4:00 pm).

**Number of seats**: 40-50 students per batch.

**Admission Notice**: The date for each new batch will be notified on the College website (<http://sscbsdu.ac.in>).

**Certification**: Certificate shall be provided by SSCBS

**Examinations:**

(i) Project work - Assigned and Evaluated by **Faculty.**

(ii) End term Exam - On line exam conducted by **SSCBS**

Note- Date of exams shall be notified later during the course. Once notified, no change of date will be allowed for any candidate.

**Requisites for course completion:** Securing at least 50% marks in each of the followings;

(i) Project Work,

(ii) End Term Examination.

**What if candidate is unable to secure the requisite percentage?**

The candidate would be given another opportunity to meet the above-mentioned requisite. If the same is not met, then the candidate can avail of a participation certificate or appear for the exam along with the next batch of students by paying the examination fees/project evaluation fee to SSCBS.

**When the certificate will be awarded:**

After successful completion of Internal Examination, Project work and End Term Examination candidates would be issued a certificate by SSCBS

**Course Coordinators:**

Dr. Neeraj Kumar Sehrawat -(nrjsehrawat@sscbsdu.ac.in , +91-7015448335)

Mr. Amit Kumar-(amit.catlog@sscbsdu.ac.in , 9958161303)

**Coordinator:**

Mr Deepak Tiwari – (placementofficer@sscbsdu.ac.in , 8744045455)

**COURSE CONTENT**

**ADVANCED EXCEL – 15 HOURS**

**OBJECTIVE:**

Learn the Number 1 Programming Language in the world, used by 750 million people

**LEARNING OUTCOMES:**

Learn Basic > Intermediate > Advanced level topics

Learn industry challenges faced in day-to-day tasks

Perform data cleaning, extract the right day and create dashboards

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| **MODULE** | **TOPIC** |
| **DATA CLEANING AND PROCESSING** | Excel shortcuts, Tips and TricksText to Columns, Flash Fill UPPER, LOWER, PROPER, FIND, LEN, CONCATENATE, LEFT, RIGHT, MIDFind and Replace |
| **ADVANCED DATA CLEANING AND PROCESSING** | REPT, SUBSTITUTE, REPLACE, TEXTJOIN, CONCAT, TEXT, TRIM, CLEANAdvanced Find and Replace |
| **FORMULAS AND FUNCTIONS** | SUM, AVERAGE, COUNT, COUNTA, MAX, MINIF, SUMIF, COUNTIF |
| **ADVANCED FUNCTIONS** | SUBTOTAL, AGGREGATEIFS, OPERATORS (AND, OR. NOT), SUMIFS, COUNTIFS, AVERAGEIFS, SUMPRODUCTFormula Auditing – Evaluation, Debugging, Tracing Errors |
| **BASIC VLOOKUP** | Concept of VLOOKUP – Approximate and Exact MatchHandling Errors |
| **ADVANCED LOOKUP** | INDEX and MATCH – VLOOKUP to the left of the dataXLOOKUP, OFFSET, INDIRECTVLOOKUP with unclean dataVLOOKUP for duplicate values |
| **PIVOT TABLES AND CHARTS** | Simple Summaries and Analysis |
| **ADVANCED PIVOT TABLES** | GETPIVOTDATAGenerate Multiple Reports in Single ClickSlicers and TimelineDashboards |
| **BASIC CHARTS** | Column, Bar, Line, Area, Pie, Donut |
| **ADVANCED CHARTS** | Scatter, 3D Map, Radar, Treemap, Sunburst, Sparklines, Pie of Pie, Bar of Pie, ComboSave chart templatesConnect to PowerPoint |
| **HANDLING DATES** | Fixing incorrect datesDATE, DAY, MONTH, YEAR |
| **ADVANCED DATE FUNCTIONS** | EDATE, EOMONTH, WEEKDAY, WEEKNUM, DATEDIFNETWORKDAYS, WORKDAY |
| **CONDITIONAL FORMATTING** | Highlight, Top / Bottom N, Heatmaps, Icon Sets |
| **ADVANCED CONDITIONAL FORMATTING** | Conditional Formatting with Rules |
| **PRACTICAL STATISTICS** | Descriptive StatisticsPercentile and QuartilesBox-Whisker ChartCorrelationRegressionForecasting |
| **DYNAMIC ARRAYS** | Introduction to dynamic array formulasSEQUENCE, OFFSET, SORT, SORTBY, FILTER, UNIQUE, LET, LAMBDA |

**VBA AUTOMATION – 5 HOURS**

**OBJECTIVE:**

Learn the programming backend of Excel

**LEARNING OUTCOMES:**

Automate tasks, reduce TAT, improve efficiency

Create UserForms

An introduction to RPA (Robotic Process Automation)

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| **MODULE** | **TOPIC** |
| **INTRODUCTION TO VBA** | Setting up your environmentExcel object libraryWrite and run your first codeData typesVariablesIf else statementsLoopsBuilt in boxes – MessageBox, InputBoxRecording Macros – automate your tasksCreate your own UserForm |

**POWERPOINT – 10 HOURS**

**OBJECTIVE:**

Learn to create stunning presentations and present business insights

**LEARNING OUTCOMES:**

Basics of data storytelling

Using Images, Videos, Shapes, Colors effectively

Connecting Excel to PowerPoint

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| **MODULE** | **TOPIC** |
| **Navigation + Shortcuts** | Navigating InterfaceQATCustom TabRibbon Keyboard shortcutsSectionsSlide Sorter |
| **Starting with Templates** | Canva / YouExec / InbuiltSlide MasterReading Reports |
| **Working with Shapes** | Grid Guide RemoveAlignmentChange SizeLayers, Lock and Selection PaneTransparencyCustom ShapesDuplicateGroupRotationMergeGradients |
| **Using Colors Effectively** | Why are colors important, Color PsychologyEcological PreferenceColor HarmonyWhat Colors MeanColor SymbolismOnline ToolsPowerPoint Tools |
| **Process Charts** | SmartArtExcalidrawLucid |
| **Working with Images** | Get Free Images - Pexels PixabayTypes: PNG JPEG GIFRemove BackgroundChanging FormatReduce Size3D ModelsPhoto Album |
| **Working with Icons** | Get Free Icons + Inbuilt IconsSVGTypes of Icons |
| **Working with Text** | DictateSynonymsTranslateTextBox Formatting - Gradient, 3D RotationShape with TextboxRemove Margin |
| **How Fonts work** | TypographySamples and Use CasesDownload Free Fonts |
| **Working with Tables** | Copy from ExcelImprove lookExamples from IndustryWingdings |
| **Morph, Animation and Zoom Effect** | Morph - IconsMorph - Progress BarMorph - BarAnimation with TextAnimation with Shape - GearZoom |
| **Working with Charts** | Copy from ExcelAnimate Charts |
| **Working with Video and Audio** | Insert Audio and VideoRecord and Insert Audio and Video |
| **Export Options, Protect Options** | PDFVideoGIFPPSXImageProtect Options - All 3 |
| **Presenting** | Presenter ModeCustom Slide ShowShortcuts while presentingSlide Transition |

**POWER BI – BASICS OF DATA VISUALIZATION – 25 HOURS**

**OBJECTIVE:**

Learn the Number 1 Business Intelligence tool used worldwide

**LEARNING OUTCOMES:**

Create dynamic dashboards

Use no-code AI and ML

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| **Module 1 – 10 HoursDATA PREPARATION** | **Connecting to different data sets** |
|  | **Basic data prep and model on Power Query** |
|  | **Drill down and Tooltip** |
|  | **Ai visuals (Q&A, Analyze, Decomposition)** |
|  | **Inbuilt visuals** |
| **Module 2 – 10 Hours****DATA VISUALIZATION AND DASHBOARDS** | **Custom visuals** |
|  | **Visualization as a Tooltip** |
|  | **Learn from existing reports** |
|  | **Final dashboard – putting it together****Filter, slicer, bookmarks, buttons** |
| **Module 3 – 5 Hours****PERFORMING COMPUTATIONS** | **Date tables** |
|  | **Relationship** |
|  | **Basic DAX** |
|  | **Merge and append** |
|  | **Conditional columns** |
|  | **Custom calculations** |
|  | **Column from examples** |

**POWER BI – ETL AND DATA MODELING – 15 HOURS**

**OBJECTIVE:**

Master data cleaning and modelling

**LEARNING OUTCOMES:**

Learn ETL (Power Query) + DAX (Data Modelling)

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| **Module 1 – 5 Hours****ADVANCED DATA CLEANING** | **Advanced Editor** |
|  | **Advanced Merge and Append** |
|  | **Reference and Duplicate Query** |
|  | **Combine Multiple Sheets and Multiple Workbooks** |
|  | **Split Into Rows / Combine into Row** |
| **Module 2 – 5 Hours****ADVANCED COMPUTATIONS AND TIME INTELLIGENCE FUNCTIONS** | **Introduction to DAX** |
|  | **Calculated Column vs Measures**  |
|  | **CALCULATE, FILTER, ALL, RELATED, UNION**  |
|  | **AVERAGEX, SUMX, SUMMARIZE** |
|  | **DATE TABLE AND TIME INTELLIGENCE FUNCTIONS** |
|  | **TOPN, RANK, CONCATENATEX** |
|  | **DAX PATTERNS** |
| **Module 3 – 3 Hours****ADVANCED POWER QUERY** | **POWER QUERY PARAMETERS (M)** |
|  | **CUSTOM FUNCTIONS (M)** |
|  | **CUSTOM DATE TABLES (M)** |
|  | **WHAT IF SCENARIO (DAX)** |
| **Module 4 – 2 Hours****CUSTOMIZING YOUR VISUALIZATIONS** | **ADVANCED VISUALIZATIONS** |
|  | **CUSTOMIZING VISUALIZATIONS AND TOOLTIPS** |

**TABLEAU – 5 HOURS**

**OBJECTIVE:**

Learn to create stunning data visualization

**LEARNING OUTCOMES:**

Introduction to Dimensions and Measures

Create dynamic dashboards

Create calculations in Tableau

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| Getting Data Ready |
| Dimensions and Measures |
| Understand Marks Card |
| Visualizations – Heat map, Tables, Maps, Bar, Column, Pie |
| Format Visualizations |
| Creating Custom Charts |
| Create Calculated Fields |
| Create Parameters |
| Create Story and Dashboards |