Course of code: MSNSD02

Title of Course: Advance Spreadsheet Tools .

Total hourse: 30 hrs

Course Objective:

✓ To enable the students to use Excel for advanced data analysis

✓ To equip the students to with automation skills on Excel

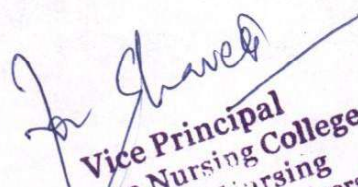✓ To enable the students to use Excel for informed decision making.

Learning Outcomes:

By studying the course, students will be able to make meaningful representation of data in the form of chart and pivot tables.

By studying the course, students will be able to draw analysis on data using spreadsheets and use   interpretation to make decisions.

By studying this course, students will be able to generate word documents with appropriate formatting, layouts, and proofing.

By studying this course, students will be able to manage data for generating queries, forms and reports in a database.

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SYLLABUS

Unit I

Excel Advanced Techniques: Templates, Efficiency, and Risk (Standard Deviation, Variance, and Coefficient of Variation), Data Validation; *Functions and Power functions, Array Formulae (Frequency Distribution, mode.mult, mode.sngi), Tables, Advanced Range Names, What-if-analysis: Goal-seek, Data tables, and Scenario Manager, Data analysis Tool Pak: Descriptive Statistics ,Problem Solving using Solver (optimal product mix, workforce scheduling, transportation, capital budgeting, financial planning). Integrating Excel with other tools: MS word, outlook, powerpoint, Access, Power BI. [8 hrs]
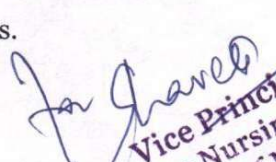
Unit II

Excel Interactivity and Automation: Index and Match, Offset, Dynamic Charting, Database functions, Text functions, and Error functions: If Error, Is Error, Aggregate, Circular Reference, Formula Auditing, Floating-Point Errors, Form Controls (Button, Combo, Check box, Spinner, [7 hrs]
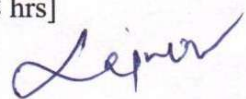
Unit III

Introduction to VBA: Conditional Formatting, Charts that Inspire (Waterfall, Column, Line, Combo, Thermometer, Scatter, Histogram) Sheers, Spark lines, Graphics Tricks and Techniques,worksheet .   [7 hrs]

Unit IV

Data Analysis and Decision-Making: Working with External Data, Advanced Uses of pivot tables, Power Pivot, Reporting with Power Pivot, Power query, Dashboard, Creating a spreadsheet in the area of: Loan and Lease statement, Ratio Analysis; Payroll Accounting; Capital Budgeting (NPV & IRR), Portfolio Management, Breakeven analysis, and Sensitivity analysis; Operations Management: Constraint, Forecasting & Trend Analysis optimization, Assignment Problems; Depreciation Accounting (Single Method); Graphical representation of data; Frequency distribution and its statistical parameters; Correlation and Regression Analysis.   [8 hrs]
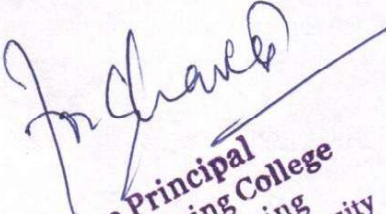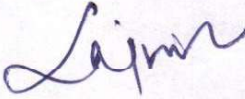
Text & References:

- Excel 2016 Power Programming with VBA, Michael Alexander, Dick Kusleika, Wiley.

- Financial Analysis and Modelling Using Excel and VBA, Chandan Sen gupta, Second Edition, Wiley Student Edition.

- MS Excel 2016, Data Analysis & Business Modelling, Wayne Winston, PHI.

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