



Rayat Shikshan Sanstha's
Dr. Patangrao Kadam Mahavidyalaya,
Ramanandnagar (Burl)
 Department of Commerce



Value Added Course 2023-24

"Advanced Excel and Data Analysis"

Board of Studies

Sr. No.	Name	Designation	Mobile No.	e-mail id
1	Smt. Pudale P. D.	Chairman & Coordinator	7057351390	Pratibhapudale2904@gmail.com
2	Mr. B. D. Patil	Co-coordinator	9021886156	Baban17dp@gmail.com
3	Mr. V. D. Salunkhe	Placement officer	9403782475	salunkhevd@gmail.com
5	Dr. A. S. Kamble	Expert from respective field	9890330330	askamble@gmail.com

Agenda:-

1. To conduct Value Added Course entitled "Advanced Excel and Data Analysis."
2. To start self-finance course for M.Com. I Students for exploring and empowering the knowledge in Advanced Excel and Data Analysis.



Pudale
 Head,

Department of Commerce
 Dr. Patangrao Kadam Mahavidyalaya,
 Ramanandnagar (Burl)

Patil

Principal,
 Dr. Patangrao Kadam Mahavidyalaya,
 Ramanandnagar (Burl)
 Tal. Palus, Dist. Sangli.



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Department of Commerce



Value Added Course 2023-24
Advanced Excel and Data Analysis

Course Report

The Department of commerce conducted value Added course for the year 2023-24 entitled Advanced Excel and Data Analysis. 10 students of first year M. Com. were enrolled for this course and completed course successfully. In this course all the necessary things which 6 units and 45 hours practical as well as 10 days training was conducted. Total 90 hours course was conducted which is covered from 1st Jan 2024 to 30th March 2024.



[Signature]
Head,

Department of Commerce
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Ramanandnagar (Burl)

[Signature]

Principal,
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Ramanandnagar (Burl)
Tal. Palus, Dist. Sangli.



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Department of Commerce



Value Added Course 2023-24

Advanced Excel and Data Analysis
Students Name List

Sr.No	Name Of The Students	Class
1	Burunge Priyanka Subhash	M.Com. I
2	Dalavi Nikita Dhanaji	M.Com. I
3	Hoval Rutuja Balwant	M.Com. I
4	Kadam Vasudha Anil	M.Com. I
5	Kamble Sneha Sunil	M.Com. I
6	Kole Tejashri Laxman	M.Com. I
7	Mulla Najiya Mansur	M.Com. I
8	Natekar Prerana Nandkumar	M.Com. I
9	Patil Shrutika Krushnrao	M.Com. I
10	Waingade Sejal Chandrakant	M.Com. I

Pradeep P.
Head

Department of Commerce





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Department of Commerce



Value Added Course 2023-24
Advanced Excel and Data Analysis

Time Table

Time	Subject	Day	Sub. Teacher
2.00 to 3.00 pm	Unit 1, 2 and 3	Monday	P. D. Pudale
2.00 to 3.00 pm	Unit 4, 5 and 6	Tuesday	B. D. Patil
2.00 to 3.00 pm	Practical	Wednesday	Dr. A. S. Kamble

PDP: Smt. P. D. Pudale

BDP: Mr. B. D. Patil

ASK: Dr. A. S. Kamble




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Value Added Course 2023-24

Advanced Excel and Data Analysis

Notice

Date:-23/12/2023

All the faculty members of department kindly informed that departmental meeting will be held on Friday 29/12/2023 at 11.30 am. In department staffroom, attend the same.

Pudale P
Chairman

Agenda:-

1. Discussion on the short term course
2. Discussion on course fee & Intake.
3. Discussion on notice to the students.
4. To prepare time table.
5. Distribution of Syllabus.

Member:-

- Prof. Smt. Pudale P. D.
- Prof. B.D. Patil
- Dr. A. S. Kamble
- Miss. Burunge Priyanka





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Value Added Course 2023-24
Advanced Excel and Data Analysis

PROCEEDING OF MEETING

Date:-30/12/2023

Departmental meeting was held on Friday 29/12/2023 at 11.30 am under the heading of Head of the department, all the members were present, main agenda of meeting was to discuss on the implementation of value added course for 1st year M.Com. students.

Committee has decided that 3 Month (45 Hrs. Theory and 45 Hrs. Practical) course entitled 'Advanced Excel and Data Analysis' will be introduced from 01/01/2024 to 30/03/2024. The governing of course committee is formed, this departmental committee will be run, govern and supervise the course. Besides this syllabus of course is finalized, work load distributed. Also the time table was prepared, Prof. B. D. Patil expressed vote of thanks and meeting is over.

Pudale
Head,

Department of Commerce

1. Prof. Pudale P. D.
2. Prof. Patil B. D.
3. Dr. A. S. Kamble
4. Miss. Burunge Priyanka





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Value Added Course 2023-24
Advanced Excel and Data Analysis

Notice

Date:- 30/12/2023

All the students of 1st year Master of commerce who admitted for value added course are informed that 'Advanced Excel and Data Analysis' is starting from 01/01/2024 to 30/03/2024, kindly notice that attendance is compulsory for course.

Time table of Theory and practical of this course will be displayed on notice board.



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Value Added Course 2023-24

**Advanced Excel and Data Analysis
Syllabus**

Name of Course: **Advanced Excel and Data Analysis**

Total Credits 6:1 Credit- 15 Hours of Theory and 1 Credit=15 Hours of Practical

Course objectives:

1. To Develop Proficiency in Advanced Excel Functions
2. To Enhance Data Visualization and Reporting Skills
3. To Enable Data-Driven Decision-Making
4. To Introduce Basic VBA Programming for Automation

Examination Pattern

Theory Syllabus (45 Hrs.=3 Credits)

Practical (45 Hrs. 3 Credits)

Course Outcomes:

After Completion of this course Student can get acquainted with:

1. Enhanced Employability
2. Data-Driven Decision-Making
3. Efficiency and Productivity
4. Foundation for Further Learning
5. Global Job Opportunities

Course Syllabus

Unit 1: Fundamentals of Excel for Data Analysis

- Introduction to advanced Excel features and functions
- Data manipulation techniques



- Data validation and conditional formatting

Unit 2: Advanced Excel Functions

- VLOOKUP, HLOOKUP, and INDEX-MATCH functions
- Array formulas and advanced logical functions
- Text and date functions for data transformation

Unit 3: Data Visualization and Reporting

- Creating and customizing charts and graphs
- Pivot tables for data summarization
- Data visualization best practices

Unit 4: Data Analysis and Scenario Modeling

- What-if analysis with data tables and Scenario Manager
- Regression analysis and statistical tools in Excel
- Sensitivity analysis for decision-making

Unit 5: Data Automation with VBA

- Introduction to Visual Basic for Applications (VBA)
- Creating macros to automate repetitive tasks
- Custom functions and user-defined functions in VBA

Unit 6: Advanced Data Cleaning and Power Tools

- Advanced data cleaning techniques
- Introduction to Power Query for data transformation
- Power Pivot for building data models and analysis

Practical's (45 Hours.)





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Value Added Course 2023-24

Advanced Excel and Data Analysis
 Attendance

Lecture- : 2.00 to 3.00 pm

Sr. No	Name of the Students	JAN 2024											
		2	3	8	9	10	15	16	17	22	23	24	29
1	Burunge Priyanka Subhash	PSB	PSB	PSB	PSB	PSB	PSB	PSB	PSB	PSB	PSB	PSB	PSB
2	Dalavi Nikita Dhanaji	DND	DND	DND	DND	DND	DND	DND	DND	DND	DND	DND	DND
3	Hoval Rutuja Balwant	RBC	RBC	RBC	RBC	RBC	RBC	RBC	RBC	RBC	RBC	RBC	RBC
4	Kadam Vasudha Anil	K	K	K	K	K	K	K	K	K	K	K	K
5	Kamble Sneha Sunil	SK	SK	SK	SK	SK	SK	SK	SK	SK	SK	SK	SK
6	Kole Tejashri Laxman	TLK	TLK	TLK	TLK	TLK	TLK	TLK	TLK	TLK	TLK	TLK	TLK
7	Mulla Najiya Mansur	OM	OM	OM	OM	OM	OM	OM	OM	OM	OM	OM	OM
8	Natekar Prerana Nandkumar	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
9	Patil Shrutika Krushnrao	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP
10	Waingade Sejal Chandrakant	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW



Pradale

Head,

Department of Commerce
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Value Added Course 2023-24

Advanced Excel and Data Analysis
 Attendance

Lecture- : 2.00 to 3.00 pm

Sr. No	Name of the Students	Jan-Feb 2024											
		30	31	5	6	7	12	13	14	19	20	21	26
1	Burunge Priyanka Subhash	PSB	PSB	PSB	PSB	PSB	PSB	PSB	PSB	PSB	PSB	PSB	PSB
2	Dalavi Nikita Dhanaji	DND	DND	DND	DND	DND	DND	DND	DND	DND	DND	DND	DND
3	Hoval Rutuja Balwant	PB	PB	PB	PB	PB	PB	PB	PB	PB	PB	PB	PB
4	Kadam Vasudha Anil	V	V	V	V	V	V	V	V	V	V	V	V
5	Kamble Sneha Sunil	SK	SK	SK	SK	SK	SK	SK	SK	SK	SK	SK	SK
6	Kole Tejashri Laxman	TLK	TLK	TLK	TLK	TLK	TLK	TLK	TLK	TLK	TLK	TLK	TLK
7	Mulla Najiya Mansur	MN	MN	MN	MN	MN	MN	MN	MN	MN	MN	MN	MN
8	Natekar Prerana Nandkumar	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
9	Patil Shrutika Krushnrao	PK	PK	PK	PK	PK	PK	PK	PK	PK	PK	PK	PK
10	Waingade Sejal Chandrakant	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS	WS



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Value Added Course 2023-24

Advanced Excel and Data Analysis
 Attendance

Lecture- : 2.00 to 3.00 pm

Sr. No	Name of the Students	Feb-March 2024											
		27	28	4	5	6	11	12	13	18	19	20	26
1	Burunge Priyanka Subhash	PSB	PSB	PSB	PSB	PSB	PSB	PSB	PSB	PSB	PSB	PSB	PSB
2	Dalavi Nikita Dhanaji	DND	DND	DND	DND	DND	DND	DND	DND	DND	DND	DND	DND
3	Hoval Rutuja Balwant	Prcost	Prcost	Prcost	Prcost	Prcost	Prcost	Prcost	Prcost	Prcost	Prcost	Prcost	Prcost
4	Kadam Vasudha Anil	VK	VK	VK	VK	VK	VK	VK	VK	VK	VK	VK	VK
5	Kamble Sneha Sunil	SKmb	SKmb	SKmb	SKmb	SKmb	SKmb	SKmb	SKmb	SKmb	SKmb	SKmb	SKmb
6	Kole Tejashri Laxman	TLK	TLK	TLK	TLK	TLK	TLK	TLK	TLK	TLK	TLK	TLK	TLK
7	Mulla Najiya Mansur	Qmulla	Qmulla	Qmulla	Qmulla	Qmulla	Qmulla	Qmulla	Qmulla	Qmulla	Qmulla	Qmulla	Qmulla
8	Natekar Prerana Nandkumar	NPV	NPV	NPV	NPV	NPV	NPV	NPV	NPV	NPV	NPV	NPV	NPV
9	Patil Shrutika Krushnrao	SPK	SPK	SPK	SPK	SPK	SPK	SPK	SPK	SPK	SPK	SPK	SPK
10	Waingade Sejal Chandrakant	SWg	SWg	SWg	SWg	SWg	SWg	SWg	SWg	SWg	SWg	SWg	SWg



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Value Added Course 2023-24
Advanced Excel and Data Analysis

Exam Notice

Student of Short Term Course "Advanced Excel and Data Analysis" are hereby informed that their examination will be conducted on 4th April, 2024

Time table is as follows.

Exam: VAC-Advanced Excel and Data Analysis

Date: 4th April, 2024

Time: 11.00 am to 1.30 pm

Place: Audio-Visual Hall



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Value Added Course 2023-24

Advanced Excel and Data Analysis

Marks sheet

Sr.No	Student Name	Marks		Total	Result
		Theory (out of 75)	Practical (out of 25)		
1	Burunge Priyanka Subhash	64	19	83	Pass
2	Dalavi Nikita Dhanaji	61	19	80	Pass
3	Hoval Rutuja Balwant	65	18	83	Pass
4	Kadam Vasudha Anil	60	19	79	Pass
5	Kamble Sneha Sunil	60	18	78	Pass
6	Kole Tejashri Laxman	64	19	83	Pass
7	Mulla Najiya Mansur	72	18	90	Pass
8	Natekar Prerana Nandkumar	74	19	93	Pass
9	Patil Shrutika Krushnrao	72	18	90	Pass
10	Waingade Sejal Chandrakant	70	17	87	Pass



Rudolf
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Value Added Course 2023-24

Advanced Excel and Data Analysis

Course Outcome

Objective of the Course:

1. To Develop Proficiency in Advanced Excel Functions
2. To Enhance Data Visualization and Reporting Skills
3. To Enable Data-Driven Decision-Making
4. To Introduce Basic VBA Programming for Automation

a) Duration: 90 Hours

b) Eligibility: B.Com. Pass out

c) Intake: 10 Students

d) Course Fees: Rs. 200/- per student

e) Examination Pattern:

75 Marks: Theory Examination

25 Marks : Practical Examination

f) Outcome:

After Completion of this course Student can get acquainted with:

1. Enhanced Employability
2. Data-Driven Decision-Making
3. Efficiency and Productivity
4. Foundation for Further Learning
5. Global Job Opportunities



Question Paper 100 Marks
Value Added Course 2023-24
Advanced Excel and Data Analysis

Question Paper

Section A: MCQ and True False (20+5)

a) Multiple Choice Questions

Choose the correct option for each of the following questions:

1. What is the primary purpose of Data Validation in Excel?

- a) Creating charts and graphs
- b) Restricting and controlling data entry
- c) Automating repetitive tasks
- d) Building data models

Answer: b) Restricting and controlling data entry

2. Which Excel function is used to search for a specific value in a vertical table (column) and return a corresponding value from another column?

- a) IF Function
- b) SUM Function
- c) VLOOKUP Function
- d) COUNT Function

Answer: c) VLOOKUP Function

3. What is the primary use of the Scenario Manager in Excel?

- a) Creating custom functions
- b) Automating repetitive tasks
- c) Managing different scenarios within a model
- d) Validating data entries

Answer: c) Managing different scenarios within a model

4. In Excel, what is VBA an abbreviation for?

- a) Visual Business Application
- b) Very Basic Algorithm
- c) Visual Basic for Applications
- d) Variable Business Analysis

Answer: c) Visual Basic for Applications

5. What is the primary purpose of the "M" formula language in Power Query?

- a) Creating charts and graphs
- b) Data transformation and manipulation
- c) Generating custom functions
- d) Building data models



Answer: b) Data transformation and manipulation

6. Which Excel function is used to extract a specific number of characters from the middle of a text string based on the starting position and length?

- a) LEFT
- b) RIGHT
- c) MID
- d) LEN

Answer: c) MID

7. Which Excel feature is used to create custom functions and automate repetitive tasks?

- a) Data Validation
- b) Power Pivot
- c) Pivot Table
- d) Visual Basic for Applications (VBA)

Answer: d) Visual Basic for Applications (VBA)

8. What is the purpose of Power Pivot in Excel?

- a) Data validation and cleaning
- b) Data summarization with pivot tables
- c) Building data models and performing analysis
- d) Creating custom charts and graphs

Answer: c) Building data models and performing analysis

9. Which Excel tool is particularly useful for handling date-related data and performing time intelligence functions?

- a) Scenario Manager
- b) Pivot Table
- c) Power Query
- d) Power Pivot

Answer: d) Power Pivot

10. What is the significance of regular expressions in text cleaning and transformation?

- a) They are used to create custom functions in Excel.
- b) They provide an interface for setting up data validation rules.
- c) They allow for advanced text manipulation and pattern matching.
- d) They automate the process of creating pivot tables.

Answer: c) They allow for advanced text manipulation and pattern matching.



b) True/False Questions

1. True or False: Data Validation in Excel allows you to restrict and control the type and format of data that can be entered into a cell or range of cells.

Answer: True

2. True or False: VLOOKUP is used to search for a specific value in a horizontal table (row) and return a corresponding value from another row.

Answer: False (VLOOKUP is used for vertical tables/columns)

3. True or False: The Scenario Manager in Excel is a tool for creating custom functions and automating repetitive tasks.

Answer: False (The Scenario Manager is used for managing different scenarios within a model)

4. True or False: Power Query is a tool for data transformation and manipulation, particularly suitable for larger datasets, and uses the "M" formula language.

Answer: True

5. True or False: Regular expressions are used to create pivot tables in Excel.

Answer: False (Regular expressions are used for text manipulation and pattern matching, not for creating pivot tables)

Section B: Long Answer Questions (25 Marks)

Answer the following questions in detail:

1. Explain the process of creating a pivot table in Excel. Provide step-by-step instructions, and mention its advantages in data summarization.
2. Discuss the importance of conditional formatting in data visualization. Provide examples of scenarios where conditional formatting can be effectively used.
3. Describe the role of the INDEX-MATCH combination in Excel. Provide an example of a real-life application where this combination is beneficial.
4. What are the key principles of data storytelling, and how do they enhance data visualization and reporting?
5. In Excel, explain the concept of Monte Carlo Simulation. How can it be applied in financial modeling?

Section C: Short Notes (25 Marks)

Answer any five of the following in brief (each question is worth 5 marks):

1. Explain the purpose of the HLOOKUP function in Excel.
2. How can data tables be used for sensitivity analysis in Excel?



3. Define "Data Validation" and its role in Excel data management.
4. What is the significance of Power Query in data transformation?
5. Briefly explain the purpose of the VBA Editor in Excel.
6. Describe the role of regular expressions in text cleaning and transformation.
7. How can Power Pivot be used for time intelligence in data modelling?
8. What are the benefits of using custom functions (User-Defined Functions) in Excel?

Section D: Practical Questions (25 Marks)

Answer any two of the following practical questions:

1. Using Excel, create a pivot table that summarizes the sales data for a fictional company. Include rows for product categories and columns for months. Calculate the total sales for each combination of category and month.
2. Write a VBA macro that automates the process of extracting data from one worksheet and populating it into another. The data should be filtered to include only records where the sales are above a specified threshold.
3. Create a custom function (User-Defined Function) in Excel using VBA that calculates the average of a range of numbers, excluding any outliers. Test the function on a sample dataset.
4. In Excel, use Power Query to import data from an external CSV file and perform the following transformations: *remove duplicates, split a text column into multiple columns, and create a pivot table summarizing the transformed data.*





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Course Details

"Advanced Excel and Data Analysis"

Objectives of the Course:

1. To Develop Proficiency in Advanced Excel Functions
2. To Enhance Data Visualization and Reporting Skills
3. To Enable Data-Driven Decision-Making
4. To Introduce Basic VBA Programming for Automation:

Course Outcomes:

After Completion of this course Student can get acquainted with:

1. Enhanced Employability
2. Data-Driven Decision-Making
3. Efficiency and Productivity
4. Foundation for Further Learning
5. Global Job Opportunities



Course Syllabus

Unit 1: Fundamentals of Excel for Data Analysis

- Introduction to advanced Excel features and functions
- Data manipulation techniques
- Data validation and conditional formatting

Unit 2: Advanced Excel Functions

- VLOOKUP, HLOOKUP, and INDEX-MATCH functions
- Array formulas and advanced logical functions
- Text and date functions for data transformation

Unit 3: Data Visualization and Reporting

- Creating and customizing charts and graphs
- Pivot tables for data summarization
- Data visualization best practices

Unit 4: Data Analysis and Scenario Modelling

- What-if analysis with data tables and Scenario Manager
- Regression analysis and statistical tools in Excel
- Sensitivity analysis for decision-making

Unit 5: Data Automation with VBA

- Introduction to Visual Basic for Applications (VBA)
- Creating macros to automate repetitive tasks
- Custom functions and user-defined functions in VBA

Unit 6: Advanced Data Cleaning and Power Tools

- Advanced data cleaning techniques
- Introduction to Power Query for data transformation
- Power Pivot for building data models and analysis

