



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad -500 043

MASTER OF BUSINESS APPLICATION

COURSE DESCRIPTOR

Course Title	IT FOR MANAGERS LABORATORY				
Course Code	CMBB13				
Programme	M.B.A				
Semester	I	M.B.A			
Course Type	Core				
Regulation	IARE - R18				
Course Structure	Theory			Practical	
	Lectures	Tutorials	Credits	Laboratory	Credits
	0	0	2	2	2
Chief Coordinator	G. Sulakshana, Assistant Professor, CSE				
Course Faculty	G. Sulakshana, Assistant Professor, CSE				

I. COURSE OVERVIEW:

The course covers the basic concepts of Information Technology in an organization ,Decision making and in depth of MS Excel working with functions ,data analysis and introduction to LaTeX.This course helps the students in gaining the knowledge and apply the mathematical logics to many modern techniques of information technology like MS Excel and LaTeX.

II. COURSE PRE-REQUISITES:

Level	Course Code	Semester	Prerequisites	Credits
-	-	-	Basic Computer Knowledge	-

III. MARKSDISTRIBUTION:

Subject	SEE Examination	CIAExamination	Total Marks
It for Managers Laboratory	70 Marks	30 Marks	100

IV. DELIVERY / INSTRUCTIONAL METHODOLOGIES:

✓	Chalk & Talk	✗	Quiz	✓	Assignments	✗	MOOCs
✓	LCD / PPT	✓	Seminars	✗	Mini Project	✗	Videos
✗	Open Ended Experiments						

V. EVALUATION METHODOLOGY:

Each theory course will be evaluated for a total of 100 marks, with 30 marks for Continuous Internal Assessment (CIA) and 70 marks for Semester End Examination (SEE). Out of 30 marks allotted for CIE during the semester, marks are awarded by taking average of two session examinations.

Semester End Examination (SEE):The SEE shall be conducted for 70 marks of 3 hours duration. The syllabus for the theory courses shall be divided into FIVE UNITS and each UNIT carries equal weightage in terms of marks distribution. The question paper pattern shall be as defined below. Two full questions with ‘either’ ‘or’ choice will be drawn from each UNIT. Each question carries 14 marks. There could be a maximum of three sub divisions in a question.

The emphasis on the questions is broadly based on the following criteria:

50 %	To test the objectiveness of the concept.
30 %	To test the analytical skill of the concept.
20 %	To test the application skill of the concept.

Continuous Internal Assessment (CIA):

For each theory course the CIA shall be conducted by the faculty/teacher handling the course as given in Table 4. CIA is conducted for a total of 30 marks, with 25 marks for Continuous Internal Examination (CIE) and 05 marks for Alternative Assessment Tool(AAT).

Table 1: Assessment pattern for CIA

Component	Theory		Total Marks
	CIE Exam	Alternative Assessment Tool(AAT)	
CIA Marks	25	05	30

Continuous Internal Examination (CIE):

Two CIE exams shall be conducted at the end of the 8th and 16th week of the semester respectively. The CIE exam is conducted for 25 marks of 2 hours duration consisting of two parts. Part–A shall have five compulsory questions of one mark each. In part–B, four out of five questions have to be answered where, each question carries 5 marks. Marks are awarded by taking average of marks scored in two CIE exams.

Alternative Assessment Tool (AAT):

Two Quiz exams shall be online examination consisting of 25 multiple choice questions and are to be answered by choosing the correct answer from a given set of choices (commonly four). Marks shall be awarded considering the average of two quizzes for every course. The AAT may include seminars, assignments, term paper, open ended experiments, five minutes video and MOOCs.

VI. HOW PROGRAM OUTCOMES ARE ASSESSED:

Program Outcomes (POs)		Strength	Proficiency assessed by
PO 2	Decision making Skills: Foster analytical and critical thinking abilities for data-based decision making.	2	Assignments
PO 5	Leadership Skills: Ability to lead themselves and others in the achievement of organizational goals, contributing effectively to a team environment.	2	Seminars
PO 7	Strategic skills: Ability to conduct strategic analysis using theoretical and practical applications.	3	Guest Lectures
PO 8	Technology Skills: Inculcate and develop technical skills to face the competitive world successfully.	3	Seminar and Guest Lectures

3 = High; 2 = Medium; 1 = Low

VII. COURSE OBJECTIVES :

The course should enable the students to:	
I	Understand the concept of information technology and its role in an organization.
II	Apply data analysis in MS Excel.
III	Identify hands on experience in working with MS Excel.
IV	Recognize different types of formulas and functions in MS Excel.
V	Examine LaTeX documentation for AMS-LaTeX and Short Math Guide for LaTeX.

VIII. COURSE OUTCOMES (COs):

Cos	Course Outcome	CLOs	Course Learning Outcome
CO 1	Enrich the knowledge on information technology in an organization.	CLO 1	Understand the basic concepts of Information Technology and Systems.
		CLO 2	Analyze the role of Information Systems in an organization.
		CLO 3	Identify the importance of MS Excel as a spreadsheet based DSS, features and uses of MS Excel.
CO 2	Understand the basic operations and features of MS Excel.	CLO 4	Apply the basic concepts of MS Excel –worksheet management, cell referencing and range formulas.
		CLO 5	Elaborate the feature of Auto sum, Sorting, Filters, Conditional formatting, charts.

CO 3	Demonstrate the migration from the basic concepts to working with functions	CLO 6	Apply various function like date and time function, math and statistical functions, financial function and database functions.
		CLO 7	Analyze logical and information functions.
CO 4	Explore data analysis techniques and apply in MS Excel.	CLO 8	Construct and evaluate Regression models in MS Excel like linear, exponential and power curve.
		CLO 9	Analyze the importance of multiple regression and analysis of variance One - way Anova, Two - way Anova.
		CLO 10	Understand the concept of creating pivot tables and pivot charts.
CO 5	Enrich the basic introduction to LaTeX for acquiring various templates to compose mathematical documents, presentation, mini projects and reports.	CLO 11	Understand the basic introduction to LaTeX for documentation.
		CLO 12	Analyze the Short Math Guide for LaTeX, Mathematical Expression, Mini Project.

IX. COURSE LEARNING OUTCOMES (CLOs):

CLO Code	CLO's	At the end of the course, the student will have the ability to	PO's Mapped	Strength of Mapping
CMBB13.01	CLO 1	Understand the basic concepts of Information Technology and Systems.	PO 2	2
CMBB13.02	CLO 2	Analyze the role of Information Systems in an organization.	PO 5	2
CMBB13.03	CLO 3	Identify the importance of MS Excel as a spreadsheet based DSS, features and uses of MS Excel.	PO 5	2
CMBB13.04	CLO 4	Apply the basic concepts of MS Excel – worksheet management, cell referencing and range formulas.	PO 7	3
CMBB13.05	CLO 5	Elaborate the feature of Auto sum, Sorting, Filters, Conditional formatting, charts.	PO 7	3
CMBB13.06	CLO 6	Apply various function like date and time function, math and statistical functions, financial function and database functions.	PO 2	2
CMBB13.07	CLO 7	Analyze logical and information functions.	PO 7	3
CMBB13.08	CLO 8	Construct and evaluate Regression models in MS Excel like linear, exponential and power curve.	PO 7	3
CMBB13.09	CLO 9	Analyze the importance of multiple regression and analysis of variance One - way Anova, Two - way Anova.	PO 2	2
CMBB13.10	CLO 10	Understand the concept of creating pivot tables and pivot charts.	PO 7	3
CMBB13.11	CLO 11	Understand the basic introduction to LaTeX for documentation.	PO 8	3
CMBB13.12	CLO 12	Analyze the Short Math Guide for LaTeX, Mathematical Expression, Mini Project.	PO 8	3

3= High; 2 = Medium; 1 = Low

X. MAPPING COURSE OUTCOMES LEADING TO THE ACHIEVEMENT OF PROGRAM OUTCOMES

Course Outcomes (COs)	Program Outcomes (PO)			
	PO 2	PO 5	PO 7	PO 8
CO 1	2	2		
CO 2			3	
CO 3	2		3	
CO 4	2		3	
CO 5				3

XI. MAPPING COURSE LEARNING OUTCOMES LEADING TO THE ACHIEVEMENT OF PROGRAM OUTCOMES:

Course Learning Outcomes (CLOs)	Program Outcomes (PO)			
	PO 2	PO 5	PO 7	PO 8
CLO 1	2			
CLO 2		2		
CLO 3		2		
CLO 4			3	
CLO 5			3	
CLO 6	2			
CLO 7			3	
CLO 8			3	
CLO 9	2			
CLO 10			3	
CLO 11				3
CLO 12				3

3 = High; 2 = Medium; 1 = Low

XII. ASSESSMENT METHODOLOGIES–DIRECT

CIE Exams	PO 2,PO 5, PO 7, PO 8	SEE Exams	PO 2,PO 5, PO 7, PO 8	Seminars	PO 5, PO 8
Assignments	PO 2	Mini Project	-	Laboratory Practices	PO 7, PO 8

XIII. ASSESSMENT METHODOLOGIES-INDIRECT

✓	Early Semester Feedback	✓	End Semester OBE Feedback
✗	Assessment of Mini Projects by Experts		

XIV. SYLLABUS

WEEK-1	INTRODUCTION OF INFORMATION TECHNOLOGY
Introduction to Information Technology and Information Systems	
WEEK-2	ROLE OF INFORMATION SYSTEMS
Role of Information Systems in an organization and Decision Support Systems (DSS)	
WEEK-3	INTRODUCTION TO MS EXCEL
MS Excel as Spreadsheet based DSS - Features of MS Excel, Uses of MS Excel.	
WEEK-4	BASICS OF MS EXCEL
Spreadsheet Orientation: Accessing, overview of toolbars, saving spreadsheet files, Using help and resources. Creating a Scheduler:- Gridlines, Format Cells, Summation, auto fill, Formatting Text	
WEEK-5	VARIOUS FORMATTING STYLES IN MS EXCEL
Calculating GPA - Features to be covered:- Cell Referencing, Formulae in spreadsheet – average, std. deviation, Charts, Renaming and Inserting worksheets, Hyper linking, Count function, Sorting, Conditional formatting.	
WEEK-6	WORKING WITH TEXT AND LOOKUP FUNCTIONS
Create a spreadsheet by using the following functions : Text Functions, Lookup Functions.	
WEEK-7	WORKING WITH FUNCTIONS
Create a spreadsheet by using the following functions : Date and Time Functions, Math and Statistical Functions, Database Functions.	
WEEK-8	DATA ANALYSIS WITH MS EXCEL
Create a spread sheet document by using data analysis concept with what - if Analysis - Data Tables, Scenario Manager, Goal Seek.	
WEEK-9	CREATION OF VARIOUS CHARTS IN MSEXCEL
Apply data analysis concept for creating Pivot Tables and Pivot Charts.	
WEEK-10	LaTeX FORMATTING
Introduction of LaTeX and LateX document formatting: Create a LaTeX document with following formatting: All margins with 1.5, headings with bold, text with normal, chapter name with blue color, line space with 1.5.	
WEEK-11	VARIOUS FORMATTING STYLES IN LaTeX
Using LaTeX to create project certificate. Features to be covered:- Formatting Fonts in word, Drop Cap in word, Applying Text effects, Using Character Spacing, Borders and Colors, Inserting Header and Footer, Using Date and Time option in both LaTeX.	
WEEK-12	GRAPHICS AND TABLES IN LaTeX
Create a LaTeX documents with images and image caption at centre alignment, table with thick border and table caption with centre alignment, row height, content with cell centre alignment.	

Text Books:
1. Gross Debra, "Succeeding in Business with Microsoft Excel - 2013: A Problem Solving Approach", Cengage Learning, 1 st Edition, 2014.
REFERENCE BOOKS:
<ol style="list-style-type: none"> 1. Paul McFedries, "Excel 2013 Formulas and Functions", Pearson Education, , 1st Edition, 2013. 2. Dodge Mark, Stinson Craig, "Microsoft Excel 2013 Inside Out", Prentice Hall of India, 1st Edition, 2013. 3. Guy Hart Davis, How to do everything with Microsoft Office Excel, Tata McGraw Hill, Revised 1st Edition, 2010. 4. Lisa Miller, "MIS Cases: Decision Making with Application Software", Pearson Education, Revised 1st Edition, 2011. 5. Giridhar Joshi, "Management Information Systems", Oxford University Press, Revised 1st Edition, 2013.
WEB REFERENCES:
<ol style="list-style-type: none"> 1. http://www.abebooks.com/servlet/SearchResults?isbn.pdf. 2. http://www.amazon.in/Succeeding-Business-Microsoft-Excel-2013 3. http://ctan.org/pkg/bibtopic
E-Text Books:
<ol style="list-style-type: none"> 1. http://www.chegg.com/textbooks/succeeding-in-business 2. http://www.cengage.com.au/product/title/succeeding-in.

XV. COURSE PLAN:

The course plan is meant as a guideline. Probably there may be changes.

Lecture No	Topics to be covered	Course Learning Outcomes (CLOs)	Reference
1-3	Concept of Information Technology and Information Systems, Role of Information Systems in an organization,	CLO 1	T1:1,5
4-6	Decision Support Systems (DSS), MS Excel as Spreadsheet	CLO 2	T1:4
7-8	MS Excel as Spreadsheet based DSS - Features of MS Excel, Uses of MS Excel.	CLO 3	T1:7,8
9-13	Worksheet Management, Cell referencing, Range – Naming and Building formulas	CLO 4	T1:2,3
14-17	Auto sum feature in Excel, Basic operations in Excel - Sorting, Filters, Conditional Formatting, Working with Charts	CLO 5	T1: 5
18-21	Text Functions, Logical and Information Functions, Lookup Functions.	CLO 6	T1:10
22-26	Date and Time Functions, Math and Statistical Functions, Financial Functions, Database Functions	CLO 7	T1:11,
27-31	Correlation, Regression - Linear, Exponential, Power curve, Multiple regression,	CLO 8	T1:1,2
32-36	Analysis of Variance - One - way Anova, Two - way Anova, What - if Analysis - Data Tables, Scenario Manager, Goal Seek, Creating Pivot Tables and Pivot Charts	CLO 10	T1:5,6
37-41	Introduction, LaTeX documentation, Getting LaTeX, Documentation for AMS-LaTeX	CLO 11	R1, R2
42-45	Short Math Guide for LaTeX, Mathematical Expression, Mini Project	CLO 12	R2, R3

XVI. GAPS IN THE SYLLABUS-TO MEET INDUSTRY / PROFESSION REQUIREMENTS:

S. No.	Description	Proposed actions	Relevance with pos
1	Analysis of Variance - One - way Anova, Two - way Anova	Seminars, Assignments	PO 2

Prepared by:

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