AMERICAN UNIVERSITY OF RAS AL KHAIMAH
CLASS SYLLABUS FOR
MIST 102: Spreadsheet Applications for Business

Class Description

Course Title: Spreadsheet Applications for Business
Credit Hours: 1 Credit Hour
Catalog Description: (1:0:1) Hands-on course using a popular spreadsheet package -Excel. Business examples are used to teach fundamentals of spreadsheets and their use in business applications. Graded as S (Satisfactory) or NS/NC (Not Satisfactory/Not Completed)
Prerequisites: None.

Instructor Information:

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Textbook

- *Essentials Excel 2003, Level 1*, 4th Edition, by Marianne Fox, Lawrence C Metzelaar, Pearson Prentice Hall, 2004, **ISBN 9780131435544**.

Course Goals

- To familiarize students with the basic features in a business context.
- To enable students to create basic worksheets, format their contents, provide functionality, and chart numeric data.

Student Learning Outcomes

Upon completion of this course, students will be able to:
- Demonstrate proficiency in using Microsoft Excel for developing spreadsheets
- Create a multi-sheet workbook
- Develop arithmetic formulae which include relative and absolute cell references
- Chart multiple data series and edit the charts
- Use different functions to analyze, calculate data and specify alternative actions based on a specified value as well as financial functions
- Format worksheet cells

Teaching and Learning Methodologies:

- Lectures
- Individual Assignments
- Laboratory

TENTATIVE CLASS SCHEDULE

WEEK	TOPICS
1	Overview of Spreadsheets and the business profit equation
2	Tutorial Exercise 1
3	Formatting worksheets; CVP financial analysis
4	Tutorial Exercise 2
5 & 6	Spreadsheet functions; Investment analysis (Part 1)
7	Tutorial Exercise 3
8 & 9	Spreadsheet charts and graphics; Investment analysis (Part 2)
10	Tutorial Exercise 4
11 & 12	Spreadsheet tables and pivots; Cash-flow Planning Tool
13	Tutorial Exercise 5
14	Goal-seek and What-if scenario analysis
15	*Catch-Up/Final Review Session*
16	*Hand in ALL your worksheets*

MIST 102: Spreadsheet Applications for Business
Tutorial Exercise 1

1. Using suitable examples, differentiate between the following pairs -
   a) Direct and Indirect costs
   b) Fixed and Variable costs

2. A firm producing toy dolls in Sharjah has the following costs -
   a) Plastic blanks for injection-moulding – AED 2.00 per doll
   b) Fabric and fasteners for doll dress - AED 1.00 per doll
   c) Utilities (electricity, water, telephone etc) – AED 5,000 per month
   d) Factory rent and business rates - AED 5000 per month
   e) Wages for casual factory operators - AED 10 per doll
   f) Salaries for administrative staff - AED 100,000 per month

   i.   Categorize the costs listed above using the terms in Q1

   ii.   Using any convenient spreadsheet package, generate a graph of
         Total Costs against the month, given the following production
         volumes –

Month	Quantity of toys produced (x 1000)
Jan	210
Feb	150
Mar	160
Apr	210
May	220
Jun	205
Jul - Dec	Quantity increases by 10% of previous month's value

3. **Prepare a set of procedure notes suitable for novice Excel users, to specify steps for generating graphs from pairs of worksheet columns. The notes should not exceed 750 words.**

4. **What other graph types may be generated using the Excel package?**

5. **Using a different worksheet tab, change the graph type used previously in Exercise 2 to a different one e.g. from a line-graph to a histogram/bar-chart or vice-versa.**

6. **Use the spreadsheet generated for Question 2, Exercise 1, as a modeling tool for providing answers to the following questions –**

   g) **By how much does the total annual variable cost change if the supplier increases the price of the plastic blanks used for injection-moulding by 50%**

   h) **If the quantity of dolls manufactured from the months of July to December decreases (rather than increase) by 5% of the previous months value, what changes do you obtain to total fixed and total variable costs for the year?**

   i) **Re-present the "Total Costs versus month" graph for the scenario outlined in part (b).**

MIST 102: Spreadsheet Applications for Business

Tutorial Exercise 3

7. **For the Sharjah-based toy doll manufacturer discussed in Exercise 1, generate a CVP-based monthly profit planning worksheet, with the following information –**

   a) **The monthly fixed and variable costs are as presented on the exercise sheet**

   b) **Each doll is sold at AED 29 to wholesalers, and all items manufactured are sold i.e. closing inventory is zero**

8. **Determine and indicate on the worksheet the number of dolls that have to be sold each month for the following scenarios –**

   i. **To break even**

   ii. **To yield a monthly operating income of AED 0.5 million**

MIST 102: Spreadsheet Applications for Business
Tutorial Exercise 4

For the Sharjah-based toy doll manufacturer discussed earlier, and using the data provided previously in Exercise 3, carry out the following sensitivity analysis –

1. **What is the percentage change in sales volume for the entire year for the two scenarios discussed in Exercise 3, Q2, if the selling price of a doll is reduced by 20% to counter competition from overseas manufacturers and maintain market share?**

2. **If utility bills and rent costs rise by 30%, what will be the resulting percentage change in sales volume over the entire year, assuming that the desired annual net income is AED 5.2 million?**

MIST 102: Spreadsheet Applications for Business

Tutorial Exercise 5

Question 1

Details of a proposed project for SAMEX LLC are given below:

Initial cost   AED1,200,000
Expected life   4 years (scrap zero) value

Estimated annual cash inflows (revenues):

Year I   AED600,000
Year 2   AED500,000
Year 3   AED400,000
Year 4   AED400,000

Estimated cost of capital is 10%, and annual expenditure each year is projected to be AED 110,000

Calculate the Net present value (of cash flows) and comment on the viability of the planned investment.