

**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:**

Name: Dr. Baliira Kalyebara

Office Location: C36

Office Hours: 10.00 – 11.00 AM

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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* |

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**Evaluation Plan**

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**Tutorial Exercise 1**

1. **Using suitable examples, differentiate between the following pairs -**
2. **Direct and Indirect costs**
3. **Fixed and Variable costs**
4. **A firm producing toy dolls in Sharjah has the following costs -**
5. **Plastic blanks for injection-moulding – AED 2.00 per doll**
6. **Fabric and fasteners for doll dress - AED 1.00 per doll**
7. **Utilities (electricity, water, telephone etc) – AED 5,000 per month**
8. **Factory rent and business rates - AED 5000 per month**
9. **Wages for casual factory operators - AED 10 per doll**
10. **Salaries for administrative staff - AED 100,000 per month**
11. **Categorize the costs listed above using the terms in Q1**
12. **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** |

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**Tutorial Exercise 2**

1. **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.**
2. **What other graph types may be generated using the Excel package?**
3. **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.**
4. **Use the spreadsheet generated for Question 2, Exercise 1, as a modeling tool for providing answers to the following questions –**
5. **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%**
6. **If the quantity of dolls manufactured from the months of July to December decreases (rather than increase) by5% of the previous months value, what changes do you obtain to total fixed and total variable costs for the year?**
7. **Re-present the “Total Costs versus month” graph for the scenario outlined in part (b).**

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**Tutorial Exercise 3**

1. **For the Sharjah-based toy doll manufacturer discussed in Exercise 1, generate a CVP-based monthly profit planning worksheet, with the following information –**
2. **The monthly fixed and variable costs are as presented on the exercise sheet**
3. **Each doll is sold at AED 29 to wholesalers, and all items manufactured are sold i.e. closing inventory is zero**
4. **Determine and indicate on the worksheet the number of dolls that have to be sold each month for the following scenarios –**
5. **To break even**
6. **To yield a monthly operating income of AED 0.5 million**

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**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?**

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**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.**