

# IS2022: BUSINESS PROGRAMMING WITH SPREADSHEET

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## Effective Term

Semester A 2022/23

## Part I Course Overview

### Course Title

Business Programming with Spreadsheet

### Subject Code

IS - Information Systems

### Course Number

2022

### Academic Unit

Information Systems (IS)

### College/School

College of Business (CB)

### Course Duration

One Semester

### Credit Units

3

### Level

B1, B2, B3, B4 - Bachelor's Degree

### Medium of Instruction

English

### Medium of Assessment

English

### Prerequisites

Nil

### Precursors

Nil

### Equivalent Courses

CB2022 Business Programming with Spreadsheet

### Exclusive Courses

GE2335 Business Programming with Spreadsheet

## Part II Course Details

### Abstract

Business programming with Spreadsheet is among the necessary skills for professionals in all business sectors, e.g. in accounting and financial services. Mastering knowledge and skills of data management using spreadsheet gives students competitive advantages in job application and career advancement. Upon completion of this course, students should be able to use spreadsheet to solve business problems and design their own spreadsheet applications to support business operations and decision making (e.g. critical skills for business analysts in banks). This course aims to: Introduce the concepts, methods and techniques of simple data management using spreadsheet (basic functions such as formula, chart, conditional formatting, pivot table, etc) for accounting and financial services, and other business sectors. Equip students with the advanced spreadsheet techniques, such as web query, macro and programming abilities to support smart business decision making.

### Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Describe the concepts of data management using spreadsheet in business.	10	x	x	
2	Describe and explain how spreadsheet techniques contribute to efficient data management.	45	x	x	
3	Develop innovative solutions for business using simple and advanced spreadsheet techniques.	45	x		x

#### A1: Attitude

Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

#### A2: Ability

Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

#### A3: Accomplishments

Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

### Teaching and Learning Activities (TLAs)

TLAs	Brief Description	CILO No.	Hours/week (if applicable)
1	TLA1. Lecture	Concepts and applications of spreadsheet techniques (e.g. formula, pivot table, what-if analysis, scenario manager, goal seeking, web query, macro, programming) to support smart business decision making are explained by instructor using real life examples, together with in-class discussions and activities by students.	1, 2, 3

2	TLA2. Laboratory	Demonstrations by instructor and hands-on exercises by students on solving problems in business using Microsoft Excel and VBA skills and functions.	1, 2, 3	
3	TLA3.Group Project	Students investigate a real life business application of spreadsheet techniques in an industry of their choice / assigned by instructor.	1, 2, 3	

**Assessment Tasks / Activities (ATs)**

ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1 AT1. Participation:Students are encouraged to participate in discussion and reflect on the materials covered in the lecture and attempt the laboratory exercises.	1, 2, 3	10	
2 AT2. Group Project:A group project, which is about Business programming with Spreadsheet (e.g. macro/VBA, data management, etc.), will be assigned to students to investigate a real-life application of Business programming with Spreadsheet in a selected industry and apply the concepts learned in the course.	1, 2, 3	30	
3 AT3. Online Exercises or Assignments:Online exercises (e.g. MC, T/F) or assignments will be given to students to reinforce their concepts learned in lecture and tutorials.	1, 2	20	

**Continuous Assessment (%)**

60

**Examination (%)**

40

**Assessment Rubrics (AR)**

**Assessment Task**

AT1. Participation

**Criterion**

Ability to accurately describe concepts of data management using spreadsheet in business

**Excellent (A+, A, A-)**

High

**Good (B+, B, B-)**

Significant

**Fair (C+, C, C-)**

Moderate

**Marginal (D)**

Basic

**Failure (F)**

Net even reaching marginal levels

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**Assessment Task**

AT1. Participation

**Criterion**

Ability to describe and explain how spreadsheet techniques contributes to efficient data management

**Excellent (A+, A, A-)**

High

**Good (B+, B, B-)**

Significant

**Fair (C+, C, C-)**

Moderate

**Marginal (D)**

Basic

**Failure (F)**

Net even reaching marginal levels

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**Assessment Task**

AT1. Participation

**Criterion**

Capacity to develop innovative solution for business using simple and advanced spreadsheet techniques

**Excellent (A+, A, A-)**

High

**Good (B+, B, B-)**

Significant

**Fair (C+, C, C-)**

Moderate

**Marginal (D)**

Basic

**Failure (F)**

Net even reaching marginal levels

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**Assessment Task**

AT2. Group Project

**Criterion**

Ability to accurately describe concepts of data management using spreadsheet in business

**Excellent (A+, A, A-)**

High

**Good (B+, B, B-)**

Significant

**Fair (C+, C, C-)**

Moderate

**Marginal (D)**

Basic

**Failure (F)**

Net even reaching marginal levels

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**Assessment Task**

AT2. Group Project

**Criterion**

Ability to describe and explain how spreadsheet techniques contributes to efficient data management

**Excellent (A+, A, A-)**

High

**Good (B+, B, B-)**

Significant

**Fair (C+, C, C-)**

Moderate

**Marginal (D)**

Basic

**Failure (F)**

Net even reaching marginal levels

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**Assessment Task**

AT2. Group Project

**Criterion**

Capacity to develop innovative solution for business using simple and advanced spreadsheet techniques

**Excellent (A+, A, A-)**

High

**Good (B+, B, B-)**

Significant

**Fair (C+, C, C-)**

Moderate

**Marginal (D)**

Basic

**Failure (F)**

Net even reaching marginal levels

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**Assessment Task**

AT3. Online Exercises or Assignments

**Criterion**

Ability to accurately describe concepts of data management using spreadsheet in business

**Excellent (A+, A, A-)**

High

**Good (B+, B, B-)**

Significant

**Fair (C+, C, C-)**

Moderate

**Marginal (D)**

Basic

**Failure (F)**

Net even reaching marginal levels

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**Assessment Task**

AT3. Online Exercises or Assignments

**Criterion**

Ability to describe and explain how spreadsheet techniques contributes to efficient data management

**Excellent (A+, A, A-)**

High

**Good (B+, B, B-)**

Significant

**Fair (C+, C, C-)**

Moderate

**Marginal (D)**

Basic

**Failure (F)**

Not even reaching marginal levels

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**Assessment Task**

AT4. Final Examination

**Criterion**

Ability to accurately describe concepts of data management using spreadsheet in business

**Excellent (A+, A, A-)**

High

**Good (B+, B, B-)**

Significant

**Fair (C+, C, C-)**

Moderate

**Marginal (D)**

Basic

**Failure (F)**

Not even reaching marginal levels

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**Assessment Task**

AT4. Final Examination

**Criterion**

Ability to describe and explain how spreadsheet techniques contributes to efficient data management

**Excellent (A+, A, A-)**

High

**Good (B+, B, B-)**

Significant

**Fair (C+, C, C-)**

Moderate

**Marginal (D)**

Basic

**Failure (F)**

Net even reaching marginal levels

**Assessment Task**

AT4. Final Examination

**Criterion**

Capacity to develop innovative solution for business using simple and advanced spreadsheet techniques

**Excellent (A+, A, A-)**

High

**Good (B+, B, B-)**

Significant

**Fair (C+, C, C-)**

Moderate

**Marginal (D)**

Basic

**Failure (F)**

Net even reaching marginal levels

**Part III Other Information****Keyword Syllabus**

Roles of data management in the business decision making (e.g. data management using Access and Excel, text processing, date/time calculation); business application of analytic techniques in spreadsheet (e.g. formula, pivot table, web query); spreadsheet programming (e.g. variables, Boolean, array, looping, data structure, decision making, function, database); spreadsheet automation through macro and VBA.

**Reading List****Compulsory Readings**

Title	
1	Steven C. Chapra, Tufts, Introduction to VBA for Excel, 2/E, Prentice Hall, 2010. ISBN-13: 9780132396677.

**Additional Readings**

Title	
1	Kari Wood, Randy Nordell, Microsoft Office Excel 2013 Complete: In Practice, McGrawHill, 2014. ISBN: 9780077486914 / 0077486919.