

# CLARENCE FITZROY BRYANT COLLEGE



**PROGRAMME:** *INFORMATION TECHNOLOGY ASSOCIATE DEGREE*

<b>CURRICULUM:</b>	<i>Information Technology and Communications</i>
<b>COURSE TITLE:</b>	<i>Introduction to Modern Computing Concepts and Computer Application</i>
<b>COURSE CODE:</b>	<i>IFTH1010</i>
<b>LEVEL OF STUDENTS:</b>	<i>N/A</i>
<b>CREDITS:</b>	<i>3</i>
<b>SEMESTER:</b>	<i>1 (one)</i>
<b>DURATION:</b>	<i>45 hours</i>
<b>PREREQUISITE(S):</b>	<i>None</i>

## RATIONALE

We are living in a world that is characterized by rapid change, voluminous data, and complex dynamics, the graduate of the ICT Associate degree programme will be employed by organizations that are striving to remain viable in the Information Age. The use of technological tools instead of humans to perform many job functions will increase in popularity in years to come.

As it is only through use of these tools that organizations will be able to improve the efficiency of their operations. This course is intended to prepare the graduate to become the driving force behind organisations as they seek to utilise various application tools to advance the productivity within the workplace.

This course is important to include in the offerings for all majors in the ICT Associate degree programme as it seeks to develop relevant application utilisation skills in ICT student. These skills will enable graduates to achieve gainful employment, and equip them to ably assist others within the work environment to develop and hone technical application skills.

## COURSE DESCRIPTION

This course provides students with comprehensive exposure to the nature, purpose, functions and utilisation of application tools in different organisations. It entails a thorough introduction to computers, word processing, presentation, spreadsheets and database application uses and functions. It seeks to develop application usage skills in all students and provide multiple opportunities for students to use them to solve problems in their everyday life. This course has some theoretical experiences, but the majority of the contact hours that have been embedded are focused on providing students with hands-on experiences with these tools.

## LEARNING OUTCOMES

On completion of this course students should be able to:

1. Describe and use different application software to solve real organisational problems
2. Create a graphical representation of the history of computing.
3. Write an essay on the genesis of the World Wide Web and use personal experiences to explain its value to modern society.
4. Apply the principles of data processing, storage and output in real work settings.

5. Draw and label the parts of a computer system
6. Evaluate the usefulness of different computer application software
7. Differentiate between type of computer, software and operating systems.
8. Use a spreadsheet application to calculate and analyse data
9. Use a word processing application to create, format and distribute different types of organisational support documents.
10. Use a database application to create systems that will serve to store, organise and manage organisational data.
11. Use a presentation and graphic application to create organisational present.
12. Use an e-mail and web browser application to communicate, distribute and locate different kinds of informational documents.
13. Use a web browser to locate information on different topics.

## CONTENT KNOWLEDGE

1. The history of computers, the Internet and Worldwide Web:
  - Generations (0 to present generation)
  - Genesis and evolution of the Internet
  - History of the World Wide Web
  - Uses of e-mail and web browsers
2. Overview of computing:
  - Key concepts
  - Computer system
    - i. Components
    - ii. Types
    - iii. Operation
3. Computer Software
  - Types and uses
  - Types: single vs. multi-user
4. Data Processing Concepts:

- Input
- Output
- Processing
- Storage and retrieval

5. Word Processing Application:

- Loading a word processing programme
- Using a word processing programme:
  - i. Inserting Objects
  - ii. Text Formatting
  - iii. Page Formatting
  - iv. Mail merging
- Working with tables:
  - i. Creating tables
  - ii. Formatting tables: Merging cells, Splitting cells, Shading cells, Cell borders
- Working with columns
- Sorting
- Bullets and numbering (Insertion and customization)
- Printing documents:
  - i. Choosing a printer
  - ii. Selection print quality
  - iii. Printing multiple copies of the same document

6. Presentation and Graphics Application:

- Features of PowerPoint
- Developing and Creating Presentation templates and backgrounds
- Run a presentation
- Viewing and editing presentations
- Working with slides:
  - i. Inserting new slides

- ii. Inserting duplicate slides
  - iii. Deleting slides
  - iv. Rearranging slides
- Working with Graphics/Video/Sound:
  - I. Graphics
  - II. Video
  - III. Sound
- Working with animation:
  - i. Customized
  - ii. Timing
- Printing Presentation:
  - i. Single slides
  - ii. Handouts
  - iii. Notes Page

## 7. Spreadsheet Application:

- Load the spreadsheet program
- Introduction to the spreadsheet program:
- Page formatting:
  - i. Formulas and functions:
  - ii. Common Math operations:
  - iii. Add numbers
  - iv. calculate the average of numbers in a range
  - v. Calculate the smallest number in a range
  - vi. Calculate the largest number in a range
  - vii. Convert measurements from one unit to another
  - viii. Count cells that contain characters
  - ix. Divide numbers

- x. Multiply numbers
  - xi. Raise a number to a power
  - xii. Round numbers
  - xiii. Subtract numbers
- Copying formulas and functions:
    - i. Absolute cell referencing;
    - ii. Relative cell referencing
    - iii. Using auto-fill
  - Creating conditional formulas:
    - i. Sum only numbers that meet a specified criterion
    - ii. Count only numbers that meet a specified criterion
    - iii. Perform an action/a calculation based on the result of a condition
  - Looking up values in a:
    - i. Horizontal list
    - ii. Vertical list
    - iii. Date operations
  - Adding dates
  - Adding times
  - Calculating the difference between two dates
  - Calculating the difference between two times
  - Inserting the current date and time in a cell
  - Inserting other dates in a cell
  - Sorting:
    - i. Data in a range.
    - ii. Using the first column in a sheet
    - iii. Using the column headings
  - Formatting cells:
    - i. Number formats

- ii. Conditional formatting
- Working with more than one spreadsheet
- Printing Spreadsheets and worksheets
- Graphs:
  - i. Bar
  - ii. Line
  - iii. Pie
  - iv. Inserting chart titles, axes, gridlines, legends, labels, the data source
  - v. Saving graph as a separate sheet and as part of the current sheet
- Formatting graphs:
  - i. Adjusting colours, font and borders
  - ii. Resizing the graph

## 8. Database Application

- Creating and maintaining a SQL Database:
  - i. Learn the guidelines for designing database and setting field properties
  - ii. Create a new database
  - iii. Create and save a table
  - iv. Define fields and specify a table's primary key
    - v. Add records to a table
    - vi. Modify the structure of a table
    - vii. Delete, move and add fields
    - viii. Change field properties
    - ix. Copy records and import tables from another database
    - x. delete and change records
- Querying a Database:
  - i. Learn how to use the Query window in Design mode
  - ii. Create run and save queries to retrieve data
  - iii. Update data using a query
  - iv. Delete data using a query

- vi. Sort data in a query
- vii. Specify an exact match condition in a query
- viii. Use the And / OR logical operators
- ix. Creating Forms and Reports:
- x. Creating forms using the form wizard
- xi. Create forms using auto format
- xii. Change a form auto Format
- xiii. Find data using a form
- xiv. Preview and print selected form record
- xv. Create a report using the Report wizard
- xv. Check errors in a report
- xvi. Insert a picture in a report
- xvii. Preview and print a report

## TEACHING AND LEARNING METHODS

- Instructor and Student Presentations
- Application Labs
- Whole and Small Group Discussions
- Group Presentations
- Group and Individual Projects
- Internet-Supported Research
- Instructor Demonstrations

## ASSESSMENT PROCEDURES

### *Coursework (60%)*

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|----------------------|------------|
| a) Mid Term          | [20 Marks] |
| b) Oral Presentation | [20 Marks] |



c) Research Project

[20 Marks]

*Final Examination (40%)*

## ASSESSMENT SUMMARY

Task / Assignment No. & Name	Due Date	Time	Weight	Type	Learning Outcomes
1. Oral Presentation	Sept. 21 <sup>st</sup>	8 am	20%	Group / Summative	1,2,3,4,5
2. Research	Oct. 19 <sup>th</sup>	8 am	20%	Project	6,7,8,9
3. Mid Term Examination	Nov. 16 <sup>th</sup>	8 am	20%	Test	10,11,12,13
4. Final Exam	December		40%	Individual	1-13

**Nb:** Dates are subjected to be changed.

## TEXTBOOKS AND REFERENCES

Shelly G.B., & Cashman, T.J. (2015). *Discovering computers 2016* (Complete Shelly Cashman Series). KY: Course Technology Publishing.

### READING LIST

Long L., & Long, N. (2003). *Computers: Information technology in perspective*. (11<sup>th</sup> ed.). New Jersey: Prentice Hall.

Shelly G., Cashman T., & Vermaat M. (2013). *Microsoft Office 2016: Introductory concepts and techniques* (Windows XP Edition). *Complete concepts and techniques*. KY: Course Technology Publishing.