

# CLARENCE FITZROY BRYANT COLLEGE



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

<b>CURRICULUM:</b>	<i>Information Technology and Communications</i>
<b>COURSE TITLE:</b>	<i>Basic Computer System Assembly</i>
<b>COURSE CODE:</b>	IFTH2004
<b>LEVEL OF STUDENTS:</b>	N/A
<b>CREDITS:</b>	3
<b>SEMESTER:</b>	<i>1 (one)</i>
<b>DURATION:</b>	<i>45 hours</i>
<b>PREREQUISITE(S):</b>	IFTH1000

## RATIONALE

This course will provide the student with the opportunity to gain the computer assembly knowledge and skills that are necessary for entry-level positions in the ICT work environment. In addition to technical training, students are expected to develop appropriate basic knowledge of hardware components; electrical circuits, operating systems and utility

software, and the problem-solving skills that are required (omission) solve computer hardware issues that arise in a technology-supported business environment.

## **COURSE DESCRIPTION**

This course introduces students to the fundamentals of computer assembly. It covers all the internal components of the computer that requires explanation of function and specifications concerning parts that would be required to build a computer. The external component parts that are needed are also covered, with an emphasis on what features and specifications to look for when buying parts to build a computer. Practical sessions are included to provide students with experience in assembling, starting from opening the new computer case, to powering your dying computer, the first boot up, to finishing the Windows installation.

## **LEARNING OUTCOMES**

At the end of this course students will learn how to:

1. Select and purchase the components that are needed to build a personal computer.
2. Assemble/setup and upgrade personal computer systems.
3. Perform installation, configuration, and upgrading of microcomputer hardware and software.
4. Install/connect associated peripherals.
5. Diagnose and troubleshoot microcomputer systems hardware and software, and other peripheral equipment.

## **CONTENT KNOWLEDGE**

1. Setting up and upgrading personal computer systems.
  - Parts of a computer system and its operation
  - Hardware and software requirements.
  - Hardware components inside of and connected to a computer.
  - Types of computer bus structure.
  - Types of processors used for personal computers and notebook computers.
2. Performing installation, configuration, and upgrading of microcomputer hardware and software.

- Setting up microcomputer systems, accessory boards
  - Types of motherboards and how to select one.
  - Installation or replacement of a motherboard.
  - Troubleshooting problems with memory
3. Installing/connecting associated peripherals.
- Learning how printers and scanners work
  - Installing printers and scanners and how to share a printer over a local area network.
  - Troubleshooting printer and scanner problems.
  - Solving hard drive problems
4. Diagnosing and troubleshoot microcomputer systems hardware and software, and other peripheral equipment.
- Understanding how to approach and solve a PC problem.
  - Troubleshooting a failed boot before the OS is loaded.
  - Describing the general approaches you need to take when installing and supporting I/O Devices.
  - Diagnose and isolate faulty components

## TEACHING AND LEARNING METHODS

- Labs
- Tutorials
- Demonstrations
- Discussions
- Presentations

## ASSESSMENT PROCEDURES

1. Coursework 60%
2. Examination 40%

## ASSESSMENT SUMMARY

Task / Assignment No. & Name	Due Date	Time	Weight	Type	Learning Outcomes
1. Oral Presentation	26 <sup>th</sup> Sept.	1pm	10%	Class Work	1
2. Practical	24 <sup>th</sup> Oct.	1pm	30%	Project	2,3
3. Research Paper	28 <sup>th</sup> Nov.	1pm	20%	Group W.	4,5
4. Mid Term	14 <sup>th</sup> Nov.	1pm	10%	Test	1,2,3
5. Final Exam	December		30%	Individual	1 – 5

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

## TEXTBOOKS AND REFERENCES

Andrews, J. (2016). *A+ guide to hardware: Managing, maintaining, and troubleshooting* (9<sup>th</sup> ed.). Boston, MA: Course Technology.

### READING LIST

1. Meyers, M. (2016). *CompTIA A+ Certification All-in-One Exam Guide, Ninth Edition* (Exams 220-901 & 220-902) (9<sup>th</sup> Edition).
2. Meyers, M. (2016). *CompTIA Network + Certification All-in-One Exam Guide, Sixth Edition* (Exam N10-006) (6<sup>th</sup> Edition).
3. Mueller, S. (2015). *Upgrading and Repairing PCs. Twenty Second (22<sup>nd</sup>) Edition.*