

## 3.0 OBJECTIVE OF THE PROGRAMME

### 3.0 DUAL TRAINING SYSTEM

The Dual Training System (DTS) is a mode of training delivery which combines the strength of the principles taught in class and that of a simulated work environment. Theoretical and practical training is delivered in the class room and the laboratories with regular visits to real life engineering industries and ICT companies.

The system embodies a strong linkage between ESITM TECHNOLOGIES with engineering and ICT firm. The aim is to benefit both your organisation and the student-trainees. ESITM TECHNOLOGIES will send the student-trainees to companies for exposure. The company makes good use of their skills and potentials by assigning them jobs where they could learn and be productive at the same time.

The company, as a DTS partner, contributes to the training of the student-trainees and through this system could develop future technical manpower. The in-company training duration is projected at 1-3 weeks. Throughout this period, the student-trainees would acquire relevant knowledge and skills as their training progresses following a training plan and they become more productive. Thus, their contribution to your company increases exponentially during the in-company training phase of their training programme.

To ensure that the in-company training is effective, ESITM TECHNOLOGIES and the company will together develop a Training Plan. The Training Plan details the assigned areas, activities, timeframe, and assigned supervisor amongst others, these aid monitoring and evaluation of the in-company training.

## Objectives

### Immediate Objectives:

- To provide technical trainees/interns for your companies, who are able to contribute significantly to your companies operation since they have been prepared in ESITM TECHNOLOGIES using an industry based curriculum before you receive them.
- To promote active linkage and collaboration with the company in manpower development.
- To reduce the training cost of training and development of technicians through optimization of training facilities of ESITM TECHNOLOGIES and utilization of your facilities for both training and production/services without the need to invest in specialized training equipment in the company.

### Long-term Objective:

- To produce the right manpower for the industry.
- Industry generates social impact through training and development of disadvantaged young people.



## 4.0 ADMISSIONS REQUIREMENTS

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Candidates must:

- Be Male Secondary School leaver
- Be at least 16years at the commencement of the program
- Submit a copy of SSCE/GCE/NECO result, birth certificate, a recommendation letter from school principal or testimonial and a passport photograph.
- Have credits in Mathematics and Physics at SSCE/GCE/NECO exams
- Pass ESITM TECHNOLOGIES entrance examination and Interviews
- Be fit to undertake the training (Medical report will be required)

#### 5.0 TRAINING CATEGORIES AND DURATION.

## 5.1 TRAINING CATEGORIES AND DURATION.

<b>INTENSIVE TRAINING PROGRAMMES</b>	<b>DURATION</b>	<b>PROGRAMMES TYPES</b>
<b>Mechatronics Technician</b>	<b>(460hrs) 3 months</b>	<b>Full Training</b>
<b>Mechatronics Technician Short Courses</b>	<b>(30hrs) 5 days</b>	<b>Short Courses</b>
<b>Website Design Expert</b>	<b>(120hrs) 1 months</b>	<b>Full Training</b>
<b>Software Development. (dotNet) Expert</b>	<b>(240hrs) 2 months</b>	<b>Full Training</b>
<b>A+ and Networking</b>	<b>(240hrs) 2 months</b>	<b>Full Training</b>

## 6.0 HIGHLIGHT OF COURSES INFORMATION, TARGET AUDIENCE, BENEFITS/LEARNING OUTCOMES.

## Course Information

Mechatronics combines technologies like Mechanics, Electric/Electronic and Information Technology; it especially covers the inter-phases between separate technologies and their collaboration in integrated and networked production systems. It attempts to help graduates of tertiary institutions and/or workers from industry back-up their theoretical knowledge with the relevant skills.

## Target Participants

Practicing technicians and engineers and Graduates of tertiary institutions of Science and engineering background.

## Topics

- Work Ethics
- Engineering Drawing
- Computer Aided Drafting
- Mechanical Measurement and Fitting
- Mechanical Drives maintenance
- Basic Electricity
- Industrial Electronics
- Industrial Motor Controls & maintenance
- Sensor Technology
- Pneumatics Systems
- Electropneumatic Controls
- Industrial Hydraulics
- Programmable Logic Controls (PLC)

## Training Outcomes

Participants will be equipped with essential knowledge and hands-on, up-to-date engineering skills required by employers in the Breweries, Food and Beverages, Petrochemicals, Oil and Gas, Engineering services and Manufacturing sectors.

## **Course Information**

Website development using the two technologies required in all webpages today: HTML (which provides structure) & CSS (which sets formatting & positioning). After a broad overview of HTML we'll learn the basics of CSS (an Advanced course in the Spring covers CSS in far more depth). We'll conclude with Responsive Web Design: a modern method for developing websites

that provides optimal viewing experiences (in terms of reading, navigation, & layout) across a wide range of traditional & mobile devices.

## **Target Participants**

Practicing technicians and engineers and Graduates of tertiary institutions of Science and engineering background.

- Html5
- CSS
- Java Scripts
- Graphic Design and Animations
- Wordpress and Ecommerce Design

## **Training Outcomes**

- Ability to implement an appropriate planning strategy for developing websites.
- Ability to produce functional, flexible, & versatile websites.
- Ability to locate, evaluate, & critically assess current & emerging technologies for developing websites.
- Possess a good working knowledge of HTML5 & CSS.
- Experience creating various small website projects.
- An awareness of the process in creating a website & the various roles needed in that process.

### 6.3 SOFTWARE DEVELOPMENT. (DOTNET) EXPERTS.

## **Course Information**

An introduction to event driven, object oriented programming techniques in VB.NET. Students will design, code, and debug Graphic User Interface (GUI) programs and apply the techniques to

business applications.

## **Target Participants**

People with particular interest in computers, graphic arts, Web design. Prerequisites are basic knowledge of how to use a computer and internet platforms e.g. email, facebook etc.

## **COURSE TOPICS**

- Introduction to Visual Basic
- Controls in GUI Programming
- Event-Driven Procedures
- Variable Scope and Lifetime
- User Defined Functions and Procedures
- List Box and Combo Box
- File Input/Output
- Multiple Forms
- Resizing forms
- Menu Control
- DataGrid
- Mysql/Accessing Database

## **Training Outcomes**

- Design and develop Graphical User Interfaces;
- Understand and code Event-Driven procedures;
- Program Visual Basic controls proficiently;
- Access database from VB.NET programs; and
- Design, develop and test Visual Basic programs.

## **6.4 HARDWARE AND NETWORKING EXPERTS.**

### **Course Information**

If you are getting ready for a career as an entry-level information technology (IT) professional or computer service technician, the CompTIA A+ course is the first step in your preparation. The course will build on your existing user-level knowledge and experience with personal computer



(PC) software and hardware to present fundamental skills and concepts that you will use on the job. In this course, you will acquire the essential skills and information you will need to install, configure, optimize, troubleshoot, repair, upgrade, and perform preventive maintenance on PCs, digital devices, and operating systems.

## **Target Participants**

This course is designed for individuals who have basic computer user skills and who are interested in obtaining a job as an entry-level IT technician. This course is also designed for students who are seeking the CompTIA A+ certification and who want to prepare for the CompTIA A+ 220-901 Certification Exam and the CompTIA 220-902 Certification Exam.

## **COURSE TOPICS**

### **1.0 Hardware**

- 1.1 BIOS
- 1.2 Motherboards and Motherboard Components.
- 1.3 RAM. Random Access Memory, w/ troubleshooting
- 1.4 PC Expansion Cards.
- 1.5 Storage w/troubleshooting
- 1.6 The CPU
- 1.7 Including 1.11: PC Connections and Connectors
- 1.8 Power & Power Supplies w/troubleshooting
- 1.9 The Right PC: Home Assignment with Exam.
- 1.10 Video and Sound
- 1.11 Completed with 1.7 above.
- 1.12 Install and configure common peripheral devices.

### **1.0 Hardware.**

- 1.13 Printers: Install & Configure

1.14 Printers: Different Technologies

1.15 Printers: Maintenance.

## **Objective 2.0 Networking**

2.1 Cables & Connectors

2.2 Cable Characteristics.

2.3 TCP/IP

2.4 TCP/IP & UDP Ports

2.5 WIFI Networking.

2.6 SOHO Networking, Install and Configure.

2.7 Connection Types

2.8 Connection Devices.

2.9 Networking Tools of the Trade.

## **3.0 Mobile Devices**

3.1 Laptop Hardware & Components

3.2 Laptop Components

3.3 Laptop Features.

3.4 Other Mobile Devices: Tablets, Phones, etc.

3.5 Accessories and Ports'

## **Examination 220-902**

### **1.0 Windows Operating Systems**

1.1 Compare Operating Systems Windows Vista, 7, 8, & 8.1

1.2 Operating System Installation

1.3 Command Line Tools.

1.4 OS Features and Tools.

1.5 The Control Panel

1.6 Install Networking on a Desktop.

1.7 Preventative Maintenance and Tools

## **Other Operating Systems**

2.1 MAC OS and Linux

2.2 Virtualization

2.3 The Cloud

2.4 Network Hosts

2.5 Mobile Operating Systems: Android, IOS, etc.

2.6 Install and Configure Mobile OS systems.

2.7 Mobile Data synchronization

## **3.0 Security**

3.1 Common Threats and Vulnerabilities

3.2 Prevention

3.3 OS Security Settings.

3.4 Deploy Security Best Practices per Workstation

3.5 Securing the mobile device

3.6 Data Disposal and Destruction

3.7 Secure a SOHO wired and wireless network.

## **Training Outcomes**

In this course, you will learn to install, configure, optimize, troubleshoot, repair, upgrade, and perform preventive maintenance on personal computers, digital devices, and operating systems.

You will learn to:

Identify the hardware components of personal computers and mobile digital devices.

Identify the basic components and functions of operating systems.

Identify networking and security fundamentals.

Identify the operational procedures that should be followed by professional PC technicians.

Install, configure, and troubleshoot display devices.

Install and configure peripheral components.

Manage system components.

Manage data storage.

Install and configure Microsoft Windows.

Optimize and maintain Microsoft Windows.

Work with other operating systems.

Identify the hardware and software requirements for client environment configurations.

Identify network technologies.

Install and configure networking capabilities.

Support mobile digital devices.

Support printers and multifunction devices.

Identify security threats, vulnerabilities, and controls.

Implement security controls.

Troubleshoot system-wide issues.

## 7.0 ENTRY LEVEL REQUIREMENTS AND SUGGESTED TRAINING FEES

### 7.0 TRAINING CATEGORIES AND DURATION.

SERIAL NO.	INTENSIVE TRAINING PROGRAMMES	ENTRY LEVEL	SUGGESTED FEES	
			STUDENTS	NON- STUDENTS

<b>1</b>	<b>Mechatronics Technician</b>	Passes in Mathematics, Physics, Chemistry and English	<b>N60,000</b>	<b>N250,000</b>
<b>2</b>	<b>Mechatronics Technician Short Courses</b>	For Technicians in industries	<b>N20,000</b>	<b>N50,000</b>
<b>3</b>	<b>Website Design Expert</b>	Passes in Mathematics, and English	<b>N25,000</b>	<b>N45,000</b>
<b>4</b>	<b>Software Development. (dotNet) Expert</b>	Passes in Mathematics, and English	<b>N30,000</b>	<b>N50,000</b>
<b>5</b>	<b>Computer Hardware and Networking Technician</b>	Passes in Mathematics, and English	<b>N30,000</b>	<b>N50,000</b>

Note:

All training programmes will be 30% theoretical principle establishment and 70% practical training based on established principle.