



**A TECHNICAL REPORT ON  
STUDENT INDUSTRIAL WORKING EXPERIENCE SCHEME  
(SIWES)**

**Held at  
TWINS MEDICINE AND DIAGNOSIS MEDICAL CENTER  
NO 21, IRESE ROAD AKURE ONDO STATE**

***Prepared By:*  
AJISAFE NAFISAT OMOWUNMI  
ND/23/SLT/PT/0618**

**SUBMITTED TO  
DEPARTMENT OF SCIENCE LABORATORY TECHNOLOGY,  
INSTITUTE OF APPLIED SCIENCE, KWARA STATE  
POLYTECHNIC, ILORIN**

**IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF  
NATIONAL DIPLOMA IN SCIENCE LABORATORY TECHNOLOGY (SLT)**

**Sept., – Dec., 2024**

## **DEDICATION**

I dedicate this technical report to the Almighty God, the giver of knowledge, wisdom and who is rich in mercy.

## **ACKNOWLEDGEMENT**

I give thanks to Almighty God for the strength, wisdom, and health to complete my SIWES program successfully.

My heartfelt appreciation goes to the management of Twins Medicine and Diagnosis Medical Center for the opportunity to undergo my training at their well-equipped and organized facility. Special thanks to the laboratory scientists and other staff who guided and supported me throughout the program.

I also thank my lecturers and SIWES coordinator at Kwara State Polytechnic for their support, follow-up, and encouragement during this period.

Finally, I appreciate my family and friends for their moral and emotional support throughout my training journey.

## **PREFACE**

*The Student Industrial Work Experience Scheme (SIWES) is a vital part of the academic training for students in science and technology-related disciplines. It bridges the gap between classroom learning and real-world application, providing students with hands-on experience in their field of study. This report presents a detailed account of my four-month industrial training at Twins Medicine and Diagnosis Medical Center, where I gained practical knowledge in various aspects of medical laboratory science. The experience not only enhanced my technical skills but also gave me insights into the importance of laboratory diagnostics in modern medicine..*

## TABLE OF CONTENT

TITLE PAGE	i
DEDICATION	ii
ACKNOWLEDGEMENTS	iii
PREFACE	iv
TABLE OF CONTENTS	v
<b>CHAPTER ONE: INTRODUCTION</b>	
1.1 INTRODUCTION	1
1.2 OBJECTIVES OF SIWES	1
1.3 OBJECTIVES OF ESTABLISHMENT	1
<b>CHAPTER TWO: OVERVIEW OF THE ORGANIZATION</b>	
2.1 INTRODUCTION	3
2.2 MISSION AND VISION OF THE ORGANIZATION	3
2.3 STRUCTURE OF THE ORGANIZATION	3
2.4 FACILITIES AVAILABLE	3
2.5 SERVICES PROVIDED	3
<b>CHAPTER THREE: WORK EXPERIENCE DURING SIWES</b>	
3.1 INTRODUCTION	5
3.2 ACTIVITIES AND RESPONSIBILITIES	5
3.3 SKILLS ACQUIRED	5
<b>CHAPTER FOUR: IMPACT OF SIWES ON MY CAREER</b>	
4.1 INTRODUCTION	6
4.2 PRACTICAL SKILLS DEVELOPMENT	6
4.3 INCREASED CAREER CONFIDENCE	6
4.4 NETWORKING AND PROFESSIONAL EXPOSURE	6
4.5 UNDERSTANDING CAREER PATHWAYS	6
<b>CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS</b>	
5.1 CONCLUSION	7
5.2 RECOMMENDATIONS	7

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 INTRODUCTION**

The Student Industrial Work Experience Scheme (SIWES) is a program established by the Industrial Training Fund (ITF) to bridge the gap between theoretical knowledge acquired in the classroom and the practical skills required in the workplace. The program is designed for students in science, technology, engineering, and related disciplines to gain hands-on experience in their fields of study.

I underwent my SIWES training at Twins Medicine and Diagnosis Medical Center, a reputable private medical facility known for offering diagnostic and medical services. This training allowed me to observe and participate in laboratory tests such as blood collection, malaria parasite testing, full blood count, HIV screening, and more. This experience enabled me to understand how laboratory practices are carried out in real healthcare environments and how diagnostic tests are essential in patient care and disease management.

#### **1.2 OBJECTIVES OF SIWES**

The general objectives of the SIWES program include:

1. To provide students with an opportunity to gain practical experience in their chosen fields of study.
2. To expose students to modern laboratory techniques and equipment.
3. To enhance the development of professional work ethics and responsibility in a real-world setting.
4. To bridge the gap between classroom theory and practical application.
5. To enable students to apply knowledge and skills acquired from school in solving practical problems.
6. To build students' confidence and prepare them for future careers in laboratory and clinical environments.
7. To promote collaboration between educational institutions and industries for mutual benefit.

#### **1.3 OBJECTIVES OF ESTABLISHMENT**

The Student Industrial Work Experience Scheme (SIWES) was introduced to enable students in science and technical disciplines to acquire relevant practical skills during their academic program. At the Twins Medicine and Diagnosis Medical Center, the SIWES program is tailored to equip students with real-time, hospital-based laboratory experiences that align with their academic training.

The specific objectives of SIWES for students at Temitope Hospital include:

1. To expose students to hospital laboratory practices, diagnostic procedures, and real patient sample handling under professional supervision.
2. To provide hands-on experience with advanced medical laboratory equipment and modern techniques used in clinical diagnosis.
3. To enable students to understand the importance of laboratory tests in disease diagnosis, monitoring, and treatment within a hospital environment.
4. To train students in standard safety procedures, infection control, and ethical practices required in a medical setting.
5. To develop students' competence and confidence in performing common laboratory tests such as HIV, Genotype, Blood Group, Full Blood Count, Malaria Parasite, and others.
6. To foster teamwork, communication skills, and patient interaction in a real healthcare setting.
7. To prepare students for future roles as professional laboratory scientists by bridging the gap between theoretical learning and clinical application.

## **CHAPTER TWO**

### **OVERVIEW OF THE ORGANIZATION**

#### **2.1 INTRODUCTION**

Twins Medicine and Diagnosis Medical Center is a private medical and diagnostic facility committed to providing quality healthcare services. The center specializes in laboratory diagnostics, outpatient care, and general consultations.

#### **2.2 MISSION AND VISION**

**Mission:** To provide reliable and affordable medical and diagnostic services with accuracy, speed, and professionalism.

**Vision:** To be a leading diagnostic and medical center recognized for excellence in patient care and laboratory diagnostics.

#### **2.3 STRUCTURE OF THE ORGANIZATION**

The organization is structured into the following units:

- Medical Director/Physician
- Laboratory Department
- Reception and Records Unit
- Pharmacy
- Consulting Room
- Radiology/Ultrasound (if applicable)

#### **2.4 FACILITIES AVAILABLE**

- Modern medical laboratory
- Blood collection room
- Microscopes, centrifuges, and diagnostic analyzers
- Air-conditioned consulting rooms
- Fully stocked pharmacy
- Waiting lounge for patients

#### **2.5 SERVICES PROVIDED**

- Laboratory testing (e.g., FBC, HIV, malaria, genotype, blood grouping)
- General medical consultation
- Blood sample collection and analysis
- Pregnancy test and antenatal screenings
- Blood glucose and urinalysis testing



## **CHAPTER THREE**

### **WORK EXPERIENCE DURING SIWES**

#### **3.1 INTRODUCTION**

During my four-month SIWES at the Twins Medicine and Diagnosis Medical Center, I gained practical experience and insights into various laboratory procedures, which significantly complemented my academic knowledge. This chapter discusses the hands-on work experience I gained and the skills developed during my time at the hospital.

#### **3.2 ACTIVITIES AND RESPONSIBILITIES**

1. **Blood Collection and Processing:** I assisted in blood sample collection, including venous and capillary blood collection. Processed blood samples for various tests such as Full Blood Count, Blood Grouping, and Malaria Parasite testing.
2. **Test Preparation and Analysis:** I prepared blood smears for Malaria and other infections. I assisted in the preparation of test reagents and calibration of equipment. I observed and assisted in HIV tests, Genotype testing, and Viral Marker testing.
3. **Phlebotomy Techniques:** I learned the importance of using correct techniques and safety measures during phlebotomy. Gained experience with various blood collection tubes and bottles used for specific tests.
4. **Use of Laboratory Equipment:** I operated laboratory equipment for routine tests, such as hematology analyzers and glucometers for blood glucose testing. I worked with diagnostic tools such as microscopes for examining blood smears.
5. **Patient Interaction:** I communicated with patients to explain procedures, ensuring their comfort and understanding of the tests being conducted. I followed safety protocols for handling blood samples and maintaining hygiene in the laboratory.

#### **3.3 SKILLS ACQUIRED**

- **Laboratory Techniques:** Gained proficiency in blood collection, sample processing, and laboratory tests.
- **Time Management:** Improved the ability to multitask and prioritize tasks in a busy hospital environment.
- **Patient Interaction:** Enhanced communication skills by interacting with patients, explaining procedures, and easing their concerns.
- **Health and Safety:** Developed an understanding of safety protocols to minimize exposure to infectious materials and maintain sterile conditions.

## **CHAPTER FOUR**

### **IMPACT OF SIWES ON MY CAREER**

#### **4.1 INTRODUCTION**

The SIWES program has played a pivotal role in shaping my career as a Science Laboratory Technology student. The experience gained at the Twins Medicine and Diagnosis Medical Center has provided me with invaluable skills, exposure, and practical knowledge that will be beneficial in my future career.

#### **4.2 PRACTICAL SKILLS DEVELOPMENT**

- Through my SIWES training, I developed strong practical skills that directly correlate with my academic studies. For example, I became proficient in blood collection techniques and the use of lab equipment, which are vital skills in any clinical laboratory setting. I gained hands-on experience in diagnostic testing, including HIV and Genotype tests, which enhanced my understanding of the theoretical concepts taught in school.

#### **4.3 INCREASED CAREER CONFIDENCE**

- The practical experience I gained boosted my confidence in laboratory settings. I now feel more equipped to perform tasks that were once theoretical in my coursework.
- I also developed problem-solving skills, learning to troubleshoot issues that arise during testing or sample collection.

#### **4.4 NETWORKING AND PROFESSIONAL EXPOSURE**

- I had the opportunity to meet and learn from experienced laboratory scientists, doctors, and nurses, providing me with professional guidance and advice for my future career.
- The exposure to real-world practices has helped me better understand the dynamics of the healthcare industry and its impact on laboratory services.

#### **4.5 UNDERSTANDING CAREER PATHWAYS**

- SIWES has helped me gain a clearer understanding of various career pathways in the healthcare industry, such as laboratory management, diagnostics, and medical research.
- I now have a better perspective on further specialization within the Science Laboratory Technology field, including areas like clinical chemistry and microbiology.

## **CHAPTER FIVE**

### **CONCLUSION AND RECOMMENDATIONS**

#### **5.1 CONCLUSION**

My SIWES experience at the Twins Medicine and Diagnosis Medical Center has been incredibly rewarding and educational. It provided me with practical skills and knowledge that I will carry throughout my career. I had the opportunity to observe and participate in various laboratory procedures, interact with healthcare professionals, and gain a deeper understanding of diagnostic testing. This exposure has significantly contributed to my growth as a Science Laboratory Technology student, preparing me for the professional challenges that lie ahead.

#### **5.2 RECOMMENDATIONS**

Based on my experience, I offer the following recommendations:

1. I suggest that students be given more opportunities for hands-on practice in advanced diagnostic techniques during their SIWES to bridge the gap between theory and practice.
2. Hospitals should invest in more modern laboratory equipment and automated systems to enhance the efficiency and accuracy of diagnostic testing.
3. I recommend that regular training workshops be organized for SIWES students, focusing on topics like laboratory safety, patient interaction, and ethical practices in the healthcare setting.
4. I propose further collaboration between hospitals and academic institutions to ensure that students are exposed to the latest technologies and techniques in laboratory science.