

# COURSE GUIDE

## **KHE 312** **FACILITY PLANNING, CONSTRUCTION AND SUPERVISION**

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## **INTRODUCTION**

It is imperative to comprehend sports facility planning, construction, and supervision with particular references made to the place of facilities in physical education; general introduction to planning of facilities and its principles, various stages in construction, maintenance, and supervision of facilities.

The course, facility planning, construction, and supervision is an important course for students studying Human Kinetics with particular references made to sports facilities construction, maintenance, and most importantly supervision. In this course, we will study the concepts and principles of sports facilities and the knowledge required for construction and maintenance for the smooth running of sports programmes in a particular sports organisation or institution. The overall aim of this course is to introduce you to the study of facility planning, construction, and supervision with particular references made to the place of facilities in physical education; general introduction to the planning of facilities and its principles, various stages in construction, maintenance, and supervision.

## **COURSE COMPETENCIES**

This course aims at providing you with relevant background information on sports facilities construction, management with particular attention to:

- i. Concepts of facility
- ii. Facility planning
- iii. Facilities construction
- iv. Facilities maintenance
- v. Supervision of facilities.

## **COURSE OBJECTIVES**

By the end of this course, you will be able to:

- i. Define the concept of sports facility
- ii. Explain the types of sports facility
- iii. State how to plan for facility construction
- iv. Discuss the steps and stages involved in facility construction
- v. List and explain common sports facility
- vi. Mention the challenges of sport facilities
- vii. Explain the principles and method of supervising sports facility
- viii. Discuss the place of facilities physical education
- ix. State the needs for facility maintenance
- x. Explain the principles of Facility Management.

## WORKING THROUGH THIS COURSE

You should be able to execute the self-assessment exercises in each of the units very correctly.

This course material also provides you with references to relevant texts and links that can enhance your understanding of the units in the modules.

## STUDY UNITS

There are 16 study units in this course divided into six modules. The modules and units are presented as follows;

### Module 1

Unit 1	Concept of facility
Unit 2	Sports facility
Unit 3	Types of sports facility

### Module 2

Unit 1	Introduction to physical education
Unit 2	The place of facilities in physical education
Unit 3	The problems of sport facility

### Module 3

Unit 1	The considerations for planning facilities
Unit 2	The principles of planning

### Module 4

Unit 1	Introduction to the construction of facilities
Unit 2	Stages of construction
Unit 3	Considerations in construction

### Module 5

Unit 1	Types of facility maintenance
Unit 2	The need for facility maintenance
Unit 3	Stages of facility maintenance

### Module 6

Unit 1	Principles of supervision of facilities
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- Unit 2           The types of supervision of facilities  
 Unit 3           Facility Management

## REFERENCES AND FURTHER READINGS

- [https://www.google.com/search?client=firefox-b-d&sxsrf=ALeKk00ilAcGEBtscf9So89I00x\\_v\\_2QA:1615804393358&q=What+is+the+definition+of+a+facility%3F&sa=X&ved=2ahUKEwi13ZG3jLLvAhXPTRUIHaAwDzAQzmd6BAgNEAU&biw=1366&bih=570](https://www.google.com/search?client=firefox-b-d&sxsrf=ALeKk00ilAcGEBtscf9So89I00x_v_2QA:1615804393358&q=What+is+the+definition+of+a+facility%3F&sa=X&ved=2ahUKEwi13ZG3jLLvAhXPTRUIHaAwDzAQzmd6BAgNEAU&biw=1366&bih=570)
- <https://www.collinsdictionary.com/dictionary/english/facility>
- <https://www.google.com/search?q=stadium+image&tbm=isch&ved=2ahUKEwig6bjoorLvAhVE8IUkHaunDpUQ2-cCegQIABAA>
- [https://www.google.com/search?q=sport+facility+lighting+images&tbm=isch&ved=2ahUKEwj17pDTpbLvAhXU0YUKHZgxDNQQ2cCegQIABAA&oq=sport+facility+lighting+images&gs\\_lcp=CgNpbWcQAzoGCAAQBxAeUPNNWJJYIKMAWgAcAB4AIAB0wyIAadtkgEJNS0yLjUuNS4ymAEAoAEBqgELZ3dzLXdpei1pbWfAAQE&sclient=img&ei=WJYPXZOdSjlwSY47CgDQ&bih=570&biw=1366&client=firefox-b-d](https://www.google.com/search?q=sport+facility+lighting+images&tbm=isch&ved=2ahUKEwj17pDTpbLvAhXU0YUKHZgxDNQQ2cCegQIABAA&oq=sport+facility+lighting+images&gs_lcp=CgNpbWcQAzoGCAAQBxAeUPNNWJJYIKMAWgAcAB4AIAB0wyIAadtkgEJNS0yLjUuNS4ymAEAoAEBqgELZ3dzLXdpei1pbWfAAQE&sclient=img&ei=WJYPXZOdSjlwSY47CgDQ&bih=570&biw=1366&client=firefox-b-d)
- <https://www.google.com/search?client=firefox-b-d&q=depth+of+an+olympic+competition+swimming+pool>
- <https://www.athleticbusiness.com/images/pdf/swimming-specs.pdf>
- [https://www.researchgate.net/publication/321506461\\_Home\\_Swimming\\_Pool\\_Design\\_to\\_Improve\\_Diving\\_Safety](https://www.researchgate.net/publication/321506461_Home_Swimming_Pool_Design_to_Improve_Diving_Safety)
- <https://www.tvs-sportssurfaces.com/what-are-the-different-types-of-sports-flooring/>
- <https://www.google.com/search?client=firefox-b-d&q=clay+court>
- <https://www.google.com/search?client=firefox-b-d&q=Singh%2C+M.+%282011%29%2C+Aims+and+Objectives+of+Physical+Education.>
- [http://wbgfiles.worldbank.org/documents/hdn/ed/saber/supporting\\_doc/AFR/Nigeria/TCH/National%20Policy%20on%20Education.pdf](http://wbgfiles.worldbank.org/documents/hdn/ed/saber/supporting_doc/AFR/Nigeria/TCH/National%20Policy%20on%20Education.pdf)
- [https://www.unn.edu.ng/publications/files/PROJECT%20WORK%20JONATHAN%20%20WORK%20\\_SEPT.pdf](https://www.unn.edu.ng/publications/files/PROJECT%20WORK%20JONATHAN%20%20WORK%20_SEPT.pdf)

<https://ask.learncbse.in/t/briefly-describe-the-objectives-of-physical-education/12174/2>

<https://easyprojectmaterials.com/influence-of-sports-facilities-and-equipment-in-teaching-and-learning-of-physical-and-health-education/>

<https://www.youtube.com/watch?v=UYqTmfNYJDA>

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[https://www.in.gov/idem/stormwater/files/stormwater\\_manual\\_chap\\_04.pdf](https://www.in.gov/idem/stormwater/files/stormwater_manual_chap_04.pdf)

<https://www.dlgsc.wa.gov.au/department/publications/publication/facility-planning-guide>

<http://sport.vic.gov.au/publications-and-resources/design-everyone-guide> Sport and Recreation Victoria.

<https://limblecmms.com/blog/facilities-manager-roles-and-responsibilities/>

<https://www.slideshare.net/mereiakali/stages-in-construction>

[www.ausport.gov.au/supporting/clubs](http://www.ausport.gov.au/supporting/clubs)

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<https://servicefutures.com/outsourcing-facilities-management-avoid-change-management-mistakes/>

<https://www.proxyclick.com/blog/successful-facility-manager-skills>

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<https://targetjobs.co.uk/careers-advice/job-descriptions/279519-facilities-manager-job-description>

[www.youtube.com/watch?v=UYqTmfNYJDA](http://www.youtube.com/watch?v=UYqTmfNYJDA)

[https://www.researchgate.net/publication/318764714\\_Sports\\_Marketing\\_Plan\\_An\\_Alternative\\_Framework\\_for\\_Sports\\_Club#fullTextFileContent](https://www.researchgate.net/publication/318764714_Sports_Marketing_Plan_An_Alternative_Framework_for_Sports_Club#fullTextFileContent)

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<https://naicc.org/wp/wpcontent/uploads/2012/09/Howtoconductinternalfieldfacilityinspectionsnotes.pdf>

## **PRESENTATION SCHEDULE**

Your course materials have important dates for early and timely completion and submission of your TMAs and attending tutorials. You should remember that you are required to submit all assignments by the stipulated time and date. You should guard against falling behind in your work.

## **ASSESSMENT**

There are three components of assessment for this course: Self-Assessment exercises and assignments at the end of each study unit, the Tutor-Marked assignments; and a written examination. In doing these assignments, you are expected to use the information gathered during your study of the course.

## **HOW TO GET THE MOST FROM THIS COURSE**

This course material provides you the opportunity of reading and learning at your own pace, time and location. To get the best of experience, you will need to work with the material in the following logical order:

1. Read each unit step by step as arranged.
2. As you read the material for each unit, note the key point in each unit.
3. Refer to the links and text provided.
4. After reading, attempt the assessment exercise given at each step.
5. You should obey all the rules and guiding instructions.

## **FACILITATION**

Online facilitation would be made available to provide you with the opportunity to interact with your tutor and your colleagues across the world.





**MAIN  
COURSE**

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## MODULE 1

### Introduction

Infrastructural development is one of the indices for measuring the advancement of industry, organisation, or even a nation in the present world. The events industry too, such as festivals, entertainment, exhibitions, sports, and many others, is speedily developing and making substantial contributions to leisure-related tourism. These activities are carried out around some structures known as facilities. The facility describes certain kinds of buildings that serve particular purposes. Sports facilities of all shapes and sizes are parts of global sports management culture. This book is intended to provide a basic understanding of the planning and design process as well as the unique features of many different areas and types of facilities.

Unit 1	Concept of Facility
Unit 2	Sports Facility
Unit 3	Types of Sports Facility

## UNIT 1 CONCEPT OF FACILITY

### CONTENTS

1.0	Introduction
2.0	Intended Learning Outcomes (ILOs)
3.0	Main Content
3.1	Definition of Facility
3.2	What facility represents in different fields?
4.0	Self-Assessment Exercise(s)
5.0	Conclusion
6.0	Summary
7.0	References/Further Readings

### 1.0 INTRODUCTION

Every organisation, institution, business and hobby have the tools to work with. These tools a times are fixed and immovable. Some of these tools have well-defined specifications for which the desired objectives of the different organs or organisations can be achieved. A closer look at these tools will explain deeply the concept of facility.

## 2.0 INTENDED LEARNING OUTCOMES (ILOS)

By the end of this unit, you will be able to:

- define the term facility
- list different kinds of facilities.

## 3.0 MAIN CONTENT

### 3.1 Definition of facility

The word facility describes something built for a particular purpose; something that makes an action, operation, or activity easier. Facilities can also be explained as buildings, pieces of equipment, or services that are provided for a particular purpose. Facilities are sometimes called installations, physical plants, or complexes.

### 3.2 Meaning of facility in different fields

**A facility in Sports Marketing:** In sports marketing, a facility refers to sport “place” or “location”. This is an essential part of the “marketing mix”. The marketing mix indices include the sport product, sport price, sports promotion, and the sport place (The 4Ps). The sport place includes several elements that influence the attractiveness of the event. This includes but is not limited to fields, courts, parking lots, restrooms, lightings, seats, the drainage system, water supply, and a host of others.

**A facility in Production Industries:** Facility in production industries is known as machine plants, electricity plants, and other installations.

**A facility in Sports and Games:** Facilities in sports and games include stadiums, courts, fields, pitches, gymnasiums, and a host of others.

**A facility in Educational Institutions:** This includes Block of Classrooms, Hostels, Library, Lecture halls, Assembly hall, Amphitheatre, and many others.

**A facility in the Entertainment Industry: Examples of facilities include** theatre, cinema halls, performing stage, and a couple of others.

1. Define the word facility.
2. Identify a facility used in the entertainment industry.

Answer

1. The word facility describes something built for a particular purpose.
2. Theater/cinema hall.

#### 4.0 SELF-ASSESSMENT EXERCISE(S)

Attempt the following questions

1. The following are forms of facilities except:
  - (a) Assembly Hall
  - (b) Racket and balls
  - (c) Basketball Court
  - (d) Factory
  
2. Which of these is not a facility in a school setting?
  - (a) Laboratory equipment
  - (b) Library
  - (c) Dining Hall
  - (d) Science Laboratory
  
3. One of the following is not a form of facility in sports.
  - (a) Soccer Field
  - (b) Athletics Track
  - (c) Cricket pitch
  - (d) Soccer ball

#### Answers to self-assessment test

1. B
2. A
3. D

#### 5.0 CONCLUSION

Having read this course and completed the assessment and self-assessment test it is assumed that you have attained an understanding of the concept of facility.

#### 6.0 SUMMARY

In this Unit, you have learnt the concept of facility and also mention has been made of some definitions of facility as it relates to a different field of studies. The assessment and self-assessment exercise have been provided to enable you understand your own rating of the understanding and learning you achieved reading this material in this Unit. Online links have also been provided to broaden your understanding of the learning required in this Unit.

## **7.0 REFERENCES/FURTHER READINGS**

Barghchi, M; Dasimah, O. & Mohd, S. A. (2009) Sports Facilities Development and Urban Generation. *Journal of Social Sciences* 5(4).

Silva, E. C., & Mazzon, J. A. (2016). Developing Social Marketing Plan for Health Promotion. *International Journal of Public Administration*, 39(8), 1-10.

## **UNIT 2      CONCEPT OF SPORTS FACILITY**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Intended Learning Outcomes (ILOs)
- 3.0 Main Content
  - 3.1 Meaning of sport facility
  - 3.2 Images of sport facilities
- 4.0 Self-Assessment Exercise(s)
- 5.0 Conclusion
- 6.0 Summary
- 7.0 References/Further Readings

### **1.0 INTRODUCTION**

Sports facility describes certain kinds of buildings that serve particular purposes. Sports facilities of all shapes and sizes are parts of global sports management culture.

### **2.0 INTENDED LEARNING OUTCOMES (ILOS)**

By the end of this unit, you will be able to:

- define the term sports facility
- list different kinds of sports facilities.

### **3.0 MAIN CONTENT**

#### **3.1 Meaning of sport facility**

The basic introduction in the development of any sport is the availability of adequate facilities both indoor and outdoor for use when needed. In the field of sports when structures and materials or tools designed to facilitate the execution of various activities are fixed and immovable, they are termed facilities, while the movable and disposable ones are called equipment. Sports facilities include such buildings as the indoor multi-purpose sports hall, fields, pitches, courts, athletics track, and a host of others.

### 3.2 Images of sport facilities



Factory project



Parking lot



Stadium Complex





School Building



Lighting



Worship Facilities

#### **4.0 SELF-ASSESSMENT EXERCISE(S)**

Attempt the following questions:

1. One of the following is a sport facility
  - a. Tennis Ball
  - b. Tennis Court
  - c. Tennis Net
  - d. Tennis Racket
  
2. Which of the following terms refer to a facility in sports marketing?
  - a. Sport Product
  - b. Sport Price
  - c. Sport Promotion
  - d. Sport Place

#### **Answers to self-assessment test**

1. C
2. d

#### **5.0 CONCLUSION**

Having read this course and completed the assessment and self-assessment test it is assumed that you have attained understanding of the introductory knowledge to facility.

#### **6.0 SUMMARY**

In this Unit, you have learned the concept of facility. And also, mention has been made of facility as it relates to sports and the place of sports facility in sports marketing. The assessment and self-assessment exercise have been provided to enable you understand your rating of the understanding and learning you achieved reading this material in this Unit. Online links have also been provided to broaden your understanding of the learning required in this Unit.

#### **7.0 REFERENCES/FURTHER READINGS**

Bucher, C. A. (1983). Administration of Physical education and Athletics Programs. C. V. Mosby Company, Michigan. ISBN080160852X, 9780801608520.

Sretenka, D. & Ana, K. (2013). Challenges of Sports Facilities and Project Management. SPORT- Science & practice, 3(2), 59-77.

## **UNIT 3      TYPES OF SPORT FACILITIES**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Intended Learning Outcomes (ILOs)
- 3.0 Main Content
  - 3.1 Athletics Track
  - 3.2 Swimming Pool
  - 3.3 Courts
  - 3.4 Fields and Pitches
  - 3.5 Indoor Multipurpose Hall
- 4.0 Self-Assessment Exercise(s)
- 5.0 Conclusion
- 6.0 Summary
- 7.0 References/Further Readings

### **1.0 INTRODUCTION**

Every sport has a different facility they operate with. Sports facilities are described according to the different games they represent. Some of these include courts, fields, athletics track, swimming pool, fitness centres, dance laboratory, and others.

### **2.0 INTENDED LEARNING OUTCOMES (ILOS)**

By the end of this unit, you will be able to:

- describe an athletics track
- list 5 different court games
- identify 3 different types of court surfaces
- describe a swimming pool.

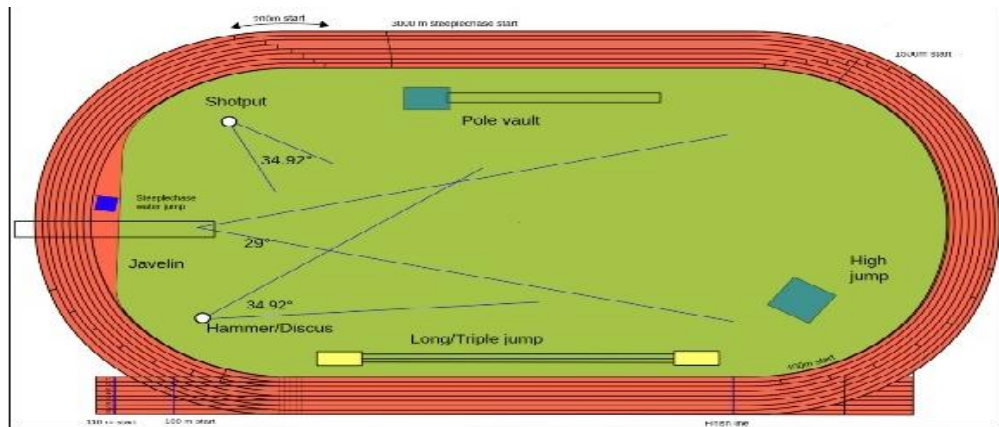
### **3.0 MAIN CONTENT**

#### **3.1 Athletics Track**

Athletics is made up of track (Running) and field (Throwing and jumping) events carried out on a well-laid-out track. A standard international track has the following characteristics:

- a. It must be oval in shape
- b. It has 8 lanes
- c. It is 400meters in distance
- d. It has 2 curves and 2 straights
- e. Each lane is 1.22meters wide
- f. Races are run in anti-clockwise direction

- g. All races are ended on the same finish line
- h. Staggered starting lines are designed for sprint races that involve the curves



Athletics Track

### In-Text Questions

1. In what direction are races run in athletics?
2. What is the shape of an athletics track?

### Answers

1. Anticlockwise
2. Oval shape

## 3.2 Swimming Pool

The swimming events are examples of aquatic sport. Aquatic sports are sporting activities carried out in water. These include water polo, surfing, canoeing, swimming, rowing, and many other water activities. Swimming is propelling the body through water (buoyancy). There is the practicing pool, diving pool, and the competition pool. The competition pool has 8 lanes drawn with ropes. It is 50meters long, 25meters wide, and 2meters deep.



Swimming Pool

### In-Text Questions

1. How many lanes does a standard swimming pool have?
2. What is the depth of an Olympic swimming pool?

### Answers

1. 8
2. 2 meters deep

## 3.3 Courts

Games played on courts include basketball, volleyball, handball, and tennis. The correct surface depends on where the court is. Special competitions were played on the different surfaces. The traditional surfaces for tennis games are clay, concrete, and grass. Grass is the traditional lawn tennis surface and famously the signature courts of Wimbledon. The Clay courts are made of crushed shale, stone, or brick. Hard courts (concrete), artificial grass, and rubber flooring (They are in the form of interlocking tiles or rubber matting). Tennis courts can be made from artificial grass, polyurethane or concrete.



Volleyball Court

### In-Text Questions

1. In what game is a clay court use?
2. Games played on courts include one of the following: Soccer, Basketball and Cricket.

### Answers

1. Tennis
2. Basketball

## 3.4 Field and Pitches

The games of soccer, field hockey, baseball, cricket, and softball are played on fields and pitches. The traditional pitch is made of natural grass. The modern pitches are now made of 3G and 4G artificial grass. The artificial grass is normally made from polyethylene (PE) offering similar play to real grass. It's available in a thickness range of 8mm to 20mm.



Soccer Field

### In-Text Questions

1. The traditional pitch is made of ...?
2. What is the shape of a soccer field?

### Answers

1. Natural grass
2. Rectangular shape

## 3.5 Indoor Multipurpose Hall

Indoor sports halls are commonly useful spaces designed to accommodate a variety of sports. Most of the games played on the court can adequately be accommodated on this single court. An indoor court should have a hard-playing surface.



Indoor Multipurpose Hall

### In-Text Questions

1. How will you distinguish the courts in an indoor multipurpose hall?
2. Which of these games is not accommodated in the indoor multipurpose hall? Volleyball, badminton, and baseball pitch.

**Answers**

1. Colour of lines
2. Baseball pitch.

**Discussion**

Can you search and share from the internet for more images and videos that can assist in achieving the intended learning objectives in this Unit?

**4.0 SELF-ASSESSMENT EXERCISE(S)**

Attempt the following questions

1. How many lanes does a standard athletics track have?
  - a. 2
  - b. 4
  - c. 6
  - d. 8
2. What is the distance of a standard oval track?
  - a. 200m.
  - b. 300m.
  - c. 400m
  - d. 500m
3. What is the depth of an Olympic swimming pool?
  - a. 1m.
  - b. 2m.
  - c. 3m.
  - d. 4m.
4. Which of these is not a traditional surface of a tennis court?
  - a. Rubber flooring
  - b. Grass
  - c. Clay
  - d. Grass
5. Which of the following games is not played on a field or pitch?
  - a. Baseball
  - b. Basketball
  - c. Soccer
  - d. Cricket

**Answers to self-assessment test**

1. d
2. c
3. b
4. a
5. b

## **5.0 CONCLUSION**

Having read this course and completed the assessment and self-assessment test it is assumed that you have attained an understanding of the different types of facilities.

## **6.0 SUMMARY**

In this Unit, you have learned the different types of sports facilities. And also, mention has been made of the characteristics of a standard athletics track and a swimming pool. Descriptions of some courts and pitches have been discussed.

The assessment and self-assessment exercise have been provided to enable you to understand your rating of the understanding and learning you achieved reading this material in this Unit. Online links have also been provided to broaden your understanding of the learning required in this Unit.

## **7.0 REFERENCES/FURTHER READINGS**

Aina, M. G. (2014). Physical and Health Education for Schools and Colleges. Blessed James Publication, Ilorin. ISBN 978-33381-2-9.

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## MODULE 2

### Introduction

Physical plant or facility, according to Ugwuanyi, (2013) is a major consideration in most physical education programmes. This module introduces you to the concept of physical education, the place or importance of sports facilities in physical education, and the challenges that might be experienced on sports facilities.

Unit 1	Introduction to Physical Education
Unit 2	The Place of Facilities in Physical Education
Unit 3	Problems of Sport Facilities

## UNIT 1 INTRODUCTION TO PHYSICAL EDUCATION

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2.0	Intended Learning Outcomes (ILOs)
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	3.1 Meaning of Physical Education
	3.2 Objectives of Physical Education
4.0	Self-Assessment Exercise(s)
5.0	Conclusion
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### 1.0 INTRODUCTION

Physical activity is said to be as old as man. That is to say that getting involved in different forms of physical activity has existed since creation. Adam and Eve's activities in the Garden of Eden were all movement-based. An unborn fetus in the mother's womb is also involved in one form of physical activity or the other. When these activities are well organised, repeated, and purpose-driven, they are termed exercise. They become sport when they are guided by rules and regulations, and when competitions and rewards are involved.

### 2.0 INTENDED LEARNING OUTCOMES (ILOS)

By the end of this unit, you will be able to:

- define physical education
- mention 5 objectives of physical education
- explain 2 of the objectives of physical education.

### 3.0 MAIN CONTENT

#### 3.1 Meaning of Physical Education

Physical Education is the training of the mind and body through selected and appropriate physical activities. It is an important part of general education that aims to develop the individual's body, thinking and the use of leisure time through the use of physical activities. Physical activity levels have a big impact on health. They help maintain cardiovascular fitness and muscle and bone strength as well as boosting immunity and improving motor skills and cognitive function. Sports facilities create opportunities for us to be active.

#### In-Text Questions

How will you define physical education?

#### Answer

Physical Education is the training of the mind and body through selected and appropriate physical activities.

#### 3.2 Objectives of Physical Education

According to Orunaboka & Nwachukwu (2012) the aim of physical education is to develop human personality in its totality. This involves the development of the physical, mental, social, emotional and moral aspects to make the individual a good citizen. Such a person should be able to contribute to the process of nation-building in his or her own way. The National Policy on Education in Nigeria classified physical education as a core subject in the curriculum of primary schools and junior secondary schools in the country. The purpose is not far from achieving the following objectives:

1. **Physical development:** This is geared towards the proper growth and development of the pupils and students as it affects the proper functioning of various systems of the body as well as the development of skills through better neuromuscular coordination and in the development of strength and endurance.
2. **Psychological development:** This can be achieved through the development of healthy interests and attitudes, reducing anxiety through participation in sports also in tailoring their emotion towards positive use.
3. **Social development:** This can be achieved through the building of interpersonal relationships among pupils and students. Becoming a worthy member of home and society as well as developing qualities of sympathy and cooperation with others. Social efficiency is concerned with one's proper adaptation to group

living. Physical education activities are concerned with one's proper adaptation to group living. Physical education activities provide ample opportunities to develop traits such as cooperation, respect for others, loyalty, sportsmanship, self-confidence, and other qualities which help a person to make a good citizen.

4. **Moral development:** Physical education is expected to develop self-control, the spirit of sportsmanship, leadership qualities, and sound personality traits among pupils and students.
5. **Mental Development:** The acquisition of the knowledge of the rules of games, sports, and exercise is expected to be transferred into other subjects in school as well as understanding health problems and their prevention.



Physical Education Facilities

### In-Text Questions

1. What is the aim of physical education?
2. List 4 objectives of Physical education.

### Answer

1. Physical education aims to develop human personality in its totality.
2. Psychology objective, physical objective, social objective and moral objective.

#### 4.0 SELF-ASSESSMENT EXERCISE(S)

Attempt the following questions

1. What is Physical Education?
2. One of the following is not an objective of Physical Education
  - (a) Physical objective
  - (b) Social objective
  - (c) Combative objective
  - (d) Psychological objective
3. Social development objective of physical education described the following except?
  - (a) Building of interpersonal relationships among pupils and students.
  - (b) Development of physical fitness
  - (c) Becoming a worthy member of home and society.
  - (d) Provides opportunities to develop traits such as cooperation and respect for others.

#### Answers to self-assessment test

1. Physical Education is the training of the mind and body through selected and appropriate physical activities.
2. C
3. B

#### 5.0 CONCLUSION

This unit has provided you with information on the meaning of physical education and its objectives. More information is made available through the links and texts attached.

#### 6.0 SUMMARY

In this unit, you have learned the definition of physical education and the objectives of physical education. You are encouraged to increase your understanding of the content of this unit by looking through the links and texts attached to the unit. Your level of understanding of this unit is indicated by how much you have performed in the in-text question and the assessment.

#### 7.0 REFERENCES/FURTHER READINGS

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## UNIT 2 THE PLACE OF FACILITIES IN PHYSICAL EDUCATION

### CONTENTS

- 1.0 Introduction
- 2.0 Intended Learning Outcome (ILO)
- 3.0 Main Content
  - 3.1 The Place of Sports Facility in Physical Education
- 4.0 Self-Assessment Exercise(s)
- 5.0 Conclusion
- 6.0 Summary
- 7.0 References/Further Readings

### 1.0 INTRODUCTION

The availability of adequate sports facilities as well as their utilisation are important ingredients in any physical education and sports programme. The level of success of most physical education and sports programmes is greatly dependent on the degree of availability, adequacy, and utilisation of modern facilities

### 2.0 INTENDED LEARNING OUTCOME (ILO)

By the end of this unit, you will be able to:

- list the importance of sports facilities to physical education.

### 3.0 MAIN CONTENT

#### 3.1 The place of sport facility in physical education

Different policy-making bodies in primary and secondary school education in Nigeria recommend adequate physical education, Sports, and recreational facilities as one of the prerequisites for establishing and operating schools in the country. Sports and recreational facilities are valuable in the teaching of physical education in the following ways:

1. **It promotes academic performance.** No meaningful learning or transfer of what has been learned will take place if such learning occurs in a situation where relevant facilities are absent. Inadequate facilities affect the academic performance of the pupils and students negatively. Adequate availability of facilities and their proper utilization have a positive correlation with good performance in examinations (Maduewesi, 2010).

2. **It motivates the learners.** There must be sufficient motivation in form of attractive facilities, for the school physical education programme in a secondary school to be successful. Where these resources are lacking, the effective functioning of the school physical education programme will be hindered.
3. **It motivates the teacher.** It increases the teacher's efficiency and promotes the productivity of the teacher. The scarcity of physical education facilities could create a hindrance in the successful teaching of physical education in schools. Availability and adequacy of facilities influence efficiency and high productivity in teaching. Where facilities are lacking, teaching may be poorly executed.
4. **It improves sports performance.** Standard facilities are fundamental to good and impressive sports performance. It might be impossible to achieve satisfactory results from athletes whose training facilities are inadequate or of sub-standard. The dream of sourcing the Nation's future Sportsmen and women from the grassroots can only be achieved when standard and adequate sports facilities are provided in the schools.
5. **It improves the sound health and fitness of pupils and students.** One of the goals of physical education is the total development of the participant's physical, mental, social, and emotional well-being. Availability of sports facilities enables students to perform a variety of physical activities which contribute to a healthy lifestyle.
6. **They allow people to be involved in team activities.** The school physical education programme offers the best opportunity to provide physical activity to all children and to teach them the skills and knowledge needed to establish and sustain an active lifestyle. Physical education facilities are therefore of great significance to educational experiences.

### **In-Text Questions**

Mention 3 values of sports facilities to physical education.

#### **Answer**

- a. It improves the academic performance of students.
- b. It improves sports performance.
- c. It motivates teachers for effective teaching.

### **4.0 SELF-ASSESSMENT EXERCISE(S)**

1. Which of these statements is not one of the importance of facility in the teaching of physical education?
  - (a) It improves the academic performance of students.
  - (b) It improves sports performance.

- (c) It motivates teachers for effective teaching.
- (d) It encourages failure in academics.
- 2. What is the importance of facilities to a teacher of physical education?
  - (a) It promotes productivity and efficiency.
  - (b) It hinders teachers/pupil's relationships.
  - (c) It improves student's playfulness.
  - (d) It promotes teachers' laziness.

#### **Answers to self-assessment test**

- 1. D
- 2. A

### **5.0 CONCLUSION**

In this unit, you have learned about the place of sports facilities in physical education. It has described the various values that are derivable from the provision of adequate facilities for physical education lessons.

### **6.0 SUMMARY**

In this unit, you have learned about the place of sports facilities in physical education.

The in-text questions and Self-Assessment Exercise you attempted were meant to provide you opportunities of testing your understanding and the amount of learning you have achieved after having studied this unit. The online links and texts that have been provided you were meant to broaden your knowledge and understanding required in this Unit.

### **7.0 REFERENCES/FURTHER READINGS**

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## UNIT 3 PROBLEMS OF SPORT FACILITIES

### CONTENTS

- 1.0 Introduction
- 2.0 Intended Learning Outcomes (ILOs)
- 3.0 Main Content
  - 3.1 Problems of Facilities
- 1.0 Self-Assessment Exercise(s)
- 5.0 Conclusion
- 6.0 Summary
- 7.0 References/Further Readings

### 1.0 INTRODUCTION

Sports facilities are needed for pupils, students, athletes, and community members to participate in professional, amateur, recreational, and mass sport. Each facility presents its own unique design challenges. If these challenges are not addressed and overcome the overall objectives of constructing them are defeated. More importantly, trying to fix these problems after construction can be costly and difficult to achieve. It is therefore important to spend the time and energy at the design stage to ensure that the proper things are done.

### 2.0 INTENDED LEARNING OUTCOMES (ILOS)

By the end of this unit, you will be able to:

- identify some factors that might create challenges for facility provision
- explain some challenges that might arise from poorly constructed facilities.

### 3.0 MAIN CONTENT

#### 3.1 Problems of facility Provisions

Poorly constructed facilities or defective ones can pose some of the following challenges:

1. **Poor facility management:** Lack of properly constructed facilities will deter the sport managers from doing their work properly. A poorly designed facility can create management challenges and increase operational costs
2. **Inaccessibility:** Inability to access convenient sports facilities will negatively influence sports participation among users. Good access road, adequate parking, closeness to users or available

transport system are some of the factors to be considered in siting facilities.

3. **Inadequate Funding:** Money required for facilities to be adequate, standard and to meet the needs and interests of the participants might be inadequate. Moreover, inadequate sports facilities to meet the population growth of an institution might pose a challenge in achieving satisfactory results from athletes whose training facilities are inadequate or of sub-standard. This can as well constitute a problem in the successful administration, organisation and management of physical education programme.
4. **Failure to plan for maintenance of the facility:** The purpose of maintenance is to extend the life span of the facilities. With proper maintenance, facilities will last longer, provide a healthier environment, and be cost-effective. Maintenance culture should be established by the physical education administrator, with proper repairs of physical education facilities
5. **Unsafe facilities:** For facilities to encourage participation, they must pose no danger to the health of the participants. When the safety of participants cannot be guaranteed, their interest in sports becomes affected and physical education programme become impaired.
6. **Failure to provide for the needs of persons with disabilities.** The very basic needs of the users are easily overlooked or forgotten when planning facilities. This will impact negatively on the success of any physical education programme.
7. **Failure to build the facility large enough to accommodate future uses.** The need for future expansion or replacement will be very costly or even impossible in some cases.
8. **Failure to plan for adequate supervision of the various activity spaces within the facility.** Poorly supervised facilities are prone to early deterioration, dilapidation, or outright collapse.

#### 4.0 SELF-ASSESSMENT EXERCISE(S)

Attempt the following questions:

1. The following are problems of facility provisions except.
  - (a) Inadequate funding
  - (b) Unsafe facilities
  - (c) Adequate planning
  - (d) Inaccessibility
2. Failure to plan for maintenance of the facility will result in the following except
  - (a) Facilities will not last long
  - (b) Safe facility
  - (c) Facility will not provide a healthy environment
  - (d) Facility will not be cost-effective

3. Adequate funding will enhance the following except
- Quick dilapidation of facility
  - Provision of standard facility
  - Ability to meet the population growth
  - Successful administration, organisation and management of physical education programme.

#### **Answers to self-assessment test**

- C
- B
- A

### **5.0 CONCLUSION**

In this unit, you have read and learned about some factors that might create challenges for facility provision and some challenges that might arise from poorly constructed facilities.

Links and texts provided in this unit are meant to broaden your understanding of the requirements in this unit. The in-text questions and self-assessment exercise will give you information on your level of understanding of this course.

### **6.0 SUMMARY**

The information and learning provided to you in this unit should enhance your understanding of some factors that might create challenges for facility provision and some challenges that might arise from poorly constructed facilities which will enable you to tackle them from the planning stage of the facility.

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## MODULE 3

### Introduction

The provision of adequate facilities depends largely on the programme provided for in the scheme, which may vary from one community to another based on interest and natural endowment.

As the cost of materials for the construction of sports facilities is moving out of reach, it becomes expedient for those who plan, design, construct, and use these facilities to have a comprehensive understanding of all that pertains to facilities. Improper planning has resulted in several design faults in sports facilities. The earlier the mistakes are discovered in the process and corrected, the less they will cost to rectify.

Unit 1            The Considerations for Planning Facilities

Unit 2            The Principles of Planning

## UNIT 1        CONSIDERATIONS FOR PLANNING FACILITIES

### CONTENTS

- 1.0    Introduction
- 2.0    Intended Learning Outcomes (ILOs)
- 3.0    Main Content
- 4.0    Self-Assessment Exercise(s)
- 5.0    Conclusion
- 6.0    Summary
- 7.0    References/Further Readings

### 1.0    INTRODUCTION

In this unit, you will learn about the factors that must be put into consideration when planning for facilities such that the facility can cater for the young, the old, the disabled, institutions, or the community concerning the objectives for setting up the facility. Before becoming too deeply involved in the planning and development process, it is important to review some of the common blunders that have been made in previous constructions

### 2.0    INTENDED LEARNING OUTCOMES (ILOS)

By the end of this unit, you will be able to:

- describe the consideration for site location
- explain the needs of the disabled.

- state why population growth should be a consideration in facility provision
- mention the legal consideration for health and safety of facility provision.

### 3.0 MAIN CONTENT

#### 3.1 Considerations for facility provision

Facility Planning and Design for Physical Activity, Recreation, and Sport are done by many professionals in the construction industry. Many times, facilities are planned without profound consideration for the goal of the programs that they will support. Fundamentally, a facility is a tool. The better it is planned, designed, and constructed, the better it will support the objectives of the programs it was to achieve. It is generally observed that in facility planning and development, errors are common during the planning and development process. The main consideration is to complete a facility project with the minimum number of errors. These considerations will include, but are not limited to the following:

1. **Site Selection:** In the selection of an appropriate site for facility construction, the following factors should be put into consideration, accessibility, inclusion, and affordability. The most important aspects of site selection are location. If the site is not in the most accessible location with a high profile for people to recognise, the success of the venture will be negatively affected. Access to parking, water supply, refuse and sewage disposal must be of priority. It should be all-inclusive (the old, young, and the disabled).
2. **Facility Provision keeping up with Population Growth.** Facilities should be planned and constructed with a view to the future. It was a common trend that facilities constructed in the past usually out-grow their use within a very short time. Most facilities constructed in educational institutions are very difficult to expand due to rising school enrolments. The story is the same in the construction of community recreation facilities.
3. **Legal consideration for health and safety:** Every construction organisation should have a clear policy for the management of health and safety so that everybody associated with the organisation is aware of its health and safety aims and objectives. One of the tort (civil wrong) of real significance in health and safety is negligence. Negligence is the lack of reasonable care or conduct which results in injury for others.
4. **Consideration for government policy:** The Local, State and Federal Governments of every county have their policies for building construction. Facility planners must comply with every

section of these policies. Some of these policies are made concerning site selection, site plans, structural plans, and a host of others.

5. **Consideration for the disabled:** The need for community facilities to have good physical access for people with disabilities are included in both the Millennium Development Goals (MDGs) and the Sustainable Development Goals (SDGs) catering for the needs and interests of the disabled.



### Planning for the disabled

6. **Climactic conditions prevalent in the area by season:** The temperature; humidity; air movement velocity, direction, amount of sunshine, and precipitation of the area are also key factors worth considering when planning facilities especially for outdoor events.
7. **Fit-For-Purpose:** Facilities should be designed to meet the needs of users and the required recreation or sports standards for the intended levels of use.
8. **Universal design:** Facilities should be designed to accommodate everyone regardless of age, gender, ability, and cultural background. This includes participants, officials, administrators, spectators, and visitors.
9. **How the facility is proposed to be managed:** Provision must be made right from the planning stage of how the facility is proposed to be managed. This would have catered for likely challenges that might surface in the future management of the facilities.

**In-Text Questions**

1. Give examples of factors to be considered when complying with the universal design principle.

**Answer**

1. Age, gender, ability, and cultural background

**4.0 SELF-ASSESSMENT EXERCISE(S)**

1. Which of these should be considered when planning facility for a government Ministry?
  - (a) Academic achievement of users
  - (b) Financial strength of users
  - (c) Disabled users
  - (d) Social status of the users
2. Which of the following factors should not be considered when planning facility for a community?
  - (a) Site selection
  - (b) Health and safety
  - (c) Consideration for population increase
  - (d) Academic attainments of users
3. The following factors should be put into consideration in site selection when planning facility except:
  - (a) Accessibility
  - (b) Inclusion
  - (c) Affordability
  - (d) Exclusion

**Answers to self-assessment test**

1. C
2. D
3. D

**5.0 CONCLUSION**

In this unit, you have learned about the various factors that deserve consideration for Planning Facilities

**6.0 SUMMARY**

In this unit, you have learned the considerations for Planning Facilities. The in-text questions and Self-Assessment Exercise you attempted were meant to provide you opportunities of testing your understanding and the amount of learning you have achieved after having studied this unit. The online links and texts that have been provided you were meant to broaden your knowledge and understanding required in this unit.



## Building Drawing & Principles of Building Planning



### Building Plans

#### 1.0 REFERENCES/FURTHER READINGS

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## **UNIT 2 THE PRINCIPLES OF PLANNING**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Intended Learning Outcomes (ILOs)
- 3.0 Main Content
  - 3.1 The principles of facility provision
- 4.0 Self-Assessment Exercise(s)
- 5.0 Conclusion
- 6.0 Summary
- 7.0 References/Further Readings

### **1.0 INTRODUCTION**

The provision of a sport or recreation facility can significantly enhance the quality of life. Activities held within sport and recreation facilities can encourage participation, promote health and wellbeing and foster a sense of community. However, planning a sport or recreation facility could sometimes be a difficult task.

### **2.0 INTENDED LEARNING OUTCOMES (ILOS)**

By the end of this unit, you will be able to:

- identify the principles involved in the facility planning process.
- explain the key principles of planning.

### **3.0 MAIN CONTENT**

#### **3.1 The principles of facility provision**

Identified principles of facility provision include:

##### **1. Principle of Funding**

The source of funding for the construction of a facility is of utmost importance. The size of the facility in terms of capacity, complexity, and aesthetic quality is determined by the availability of funds. The source or sources of funding should be identified before commencing the planning phase of the project. The maintenance management is also cost involving. Funding for facility provision and maintenance may be sourced through contributions from potential user groups, fundraising activities, voluntary donations of materials and services, or sponsorship.

## **2. Principle of Joint provision (shared use facilities)**

As part of the consideration for funding, the cost of construction can be shared by neighboring communities in very close proximity with similar business objectives and cordial relationships. In this situation, the facility is sited in a location where two or more establishments or communities can put them into profitable use. This procedure will enhance improved relationships between organisations and within a community, reduce operating costs, create access to a broader range of services and expertise, and bring about less duplication and maximum use of community facilities and services. If the arrangement for shared facilities is to be effective, all parties need to be compatible. Agreements for joint facilities should be very detailed especially in the choice of location, funding, management, risk allocation, and use of the facility. However, if the sharing arrangement is to yield good fruits, their application must be flexible, honest, open to communication and co-operation.

## **3. Principle of Planning**

The facility planning process is to undertake a facility-specific needs assessment. This process will confirm whether a new facility is necessary or if the need can be provided in some other way (as in shared use of the facility). It will also provide clear direction concerning the most appropriate scope, scale, and mix of components for the proposed facility. The facility planning process should ensure the proposed facility supports the organisation's strategic plan; ensure the proposed facilities are justified and feasible; coordinate planning with other facility providers and government agencies; undertake community consultation throughout the facility planning process and ensure that various options have been considered for location, design, and construction.

## **4. Principle of Design**

The design phase commences after the report of the feasibility study recommends building a facility. It is at this point a management plan is finalised, a design brief is developed and a design consultant or team is appointed. The designed facility should be practical, flexible, adaptable, multi-functional, energy-efficient, and low maintenance cost.

## **5. Principle of Management**

Develop a management plan to reflect operational strategies and design priorities towards the realisation of the organisational goal. This will include supervision and maintenance.

#### 4.0 SELF-ASSESSMENT EXERCISE(S)

Attempt the following questions

1. In the principle of design, a facility should have the following characteristics except:
  - (a) Multi-functionality
  - (b) Energy efficient
  - (c) Adaptability
  - (d) High maintenance cost.
  
2. In the principle of funding, the following are determined by the availability of funds:
  - (a) The capacity of the facility
  - (b) The amount of rain all around the facility
  - (c) The complexity of the facility
  - (d) The aesthetic quality of the facility.
  
3. Funding for facility provision and maintenance may be sourced through the following means, except:
  - (a) Contribution from potential user groups
  - (b) Fundraising activities
  - (c) Management of facility
  - (d) Voluntary donations of materials and services.

#### Answers to self-assessment test

1. D
2. B
3. C

#### 5.0 CONCLUSION

This unit has provided you with information on the principles of facility provision. More information is made available to you through the links and texts attached to this unit to further your understanding of the history of hockey and the nature of the game of hockey.

#### 6.0 SUMMARY

In this unit, you have learned the principles of facility provision. You are encouraged to increase your understanding of the content of this unit by looking through the links and texts attached to the unit. Your level of understanding of this unit is indicated by how much you have performed in the in-text question and the assessment.

## 7.0 REFERENCES/FURTHER READINGS

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## MODULE 4

### Introduction

Sports infrastructural facilities play an important role in reviewing the healthy living of people. A well-constructed sports facility will enable athletes to confidently use facilities without any fear of injury. The larger a building project, the greater the likelihood that mistakes will be made in the planning and design process. Most times, details are overlooked at the planning stage, and sometimes even major mistakes are made in the process. These errors will affect the construction stage. This unit will discuss various factors that are connected with the construction process.

Unit 1	Introduction to Construction of Facilities
Unit 2	Stages of Construction
Unit 3	Considerations in Construction

## UNIT 1 INTRODUCTION TO CONSTRUCTION OF FACILITIES

### CONTENTS

- 1.0 Introduction
- 2.0 Intended Learning Outcomes (ILOs)
- 3.0 Main Content
  - 3.1 Stakeholders in construction
  - 3.2 Responsibilities of a Facility Manager
  - 3.3 Qualities of an outstanding Facility Manager
- 4.0 Self-Assessment Exercise(s)
- 5.0 Conclusion
- 6.0 Summary
  - 1.1 References/Further Readings

### 1.0 INTRODUCTION

The process of facility provision right from the planning, construction, maintenance and the general management stage is usually a product of team spirit. Lapses or negligence at any of these stages can mar the attainment of the goal for which the facility is designed to achieve.

### 2.0 INTENDED LEARNING OUTCOMES (ILOS)

By the end of this unit, you will be able to:

- list some of the stakeholders in the construction industry.
- explain the roles of stakeholders in the construction industry.

### 3.0 MAIN CONTENT

#### 3.1 Stakeholders in construction

Planning and constructing facilities in sport are team efforts. The following professionals may be required in the construction process:

**Project Manager:** He is responsible for managing the activities of the design team through to the construction phase of the project.

**Architect:** He develops the architectural plans and design drawings

**Structural engineer:** He advances project engineering advice.

**Civil engineers:** He informs in-ground services infrastructure and storm water system or consent requirements.

**Quantity surveyor:** He is the cost planner. He advises on the project costing estimates

**Facility manager:** A facility manager is a professional that encompasses multiple disciplines to ensure functionality, comfort, safety, and efficiency of the built environment by integrating people, place, process, and technology. Facilities managers are responsible for the maintenance and upkeep of an organisation's buildings, ensuring that they meet legal requirements and health and safety standards.

#### 3.2 Responsibilities of a Facility Manager

The role of the facility manager is to ensure that the facility is operating maximally daily by completing daily inspections and conducting proactive and reactive maintenance. Here is a list of some of the things a facility manager is expected to do:

1. He is expected to source and oversee contracts and service providers for functions such as catering, cleaning, parking, security, and technology
2. He advises businesses on measures to improve the efficiency and cost-effectiveness of the facility
3. He supervises teams of staff across different divisions
4. He ensures that basic facilities are well-maintained and conducting proactive maintenance
5. He deals with emergencies as they arise
6. He manages budgets
7. Ensuring that facilities meet compliance standards and government regulations

8. He plans for the future by forecasting the facility's upcoming needs and requirements
9. He oversees any renovations, refurbishments and building projects
10. He drafts maintenance reports.

### **In-Text Questions**

1. Mention 5 professionals that will be involved in the construction process.
2. State 2 functions of facility manager

### **Answer**

1. (a) Architect  
(b) Civil Engineer  
(c) Structural Engineer  
(d) Quantity Surveyor  
(e) Facility Manager
2. (a) He supervises teams of staff across different divisions  
(b) He ensures that basic facilities are well-maintained and conducting proactive maintenance

### **3.3 Qualities of an outstanding Facility Manager**

The qualities include, but not limited to:

1. He must be a relationship-builder
2. He must have the ability to prioritise and multi-task
3. He must be endowed with time management skills
4. He must have the capacity to build teamwork, leadership and motivational skills
5. He must possess the procurement and negotiation skills
6. He must be proactive in thinking
7. He must be passionate about delivering consistent excellence.



Construction in progress



**In-Text Questions**

List 2 qualities of a facility manager.

**Answer**

1. He must be a relationship-builder.
2. He must have the ability to prioritise and multi-task.

**1.0 SELF-ASSESSMENT EXERCISE(S)**

Attempt the following questions

1. Who develops the architectural plans and design drawings in the construction process?
  - (a) Architect
  - (b) Structural Engineer
  - (c) Civil Engineer
  - (d) Artist
2. Which professional is responsible for the maintenance and upkeep of an organisation's buildings?
  - (a) Architect
  - (b) Structural Engineer
  - (c) Civil Engineer
  - (d) Facility manager
3. The following professionals are team players in the construction industry except:
  - (a) Architect
  - (b) Aeronautic Engineer
  - (c) Civil Engineer
  - (d) Facility manager
4. The qualities of a Facility Manager include the following except:
  - (a) He must be a relationship-builder
  - (b) He must have the ability to prioritise and multi-task
  - (c) He must be able to design a building plan
  - (d) He must be endowed with time management skills

**Answers to self-assessment test**

1. A
2. D
3. B
4. C

**4.0 CONCLUSION**

In this unit, you have read and learnt the Stakeholders in construction, the responsibilities of a facility manager, and the qualities of a facility manager. Links and texts provided in this unit are meant to broaden your understanding of the requirements in this unit. The in-text questions and

self-assessment exercise will give you information on your level of understanding of this course.

## **5.0 SUMMARY**

The information and learning provided to you in this unit should enhance your understanding of stakeholders in construction, the responsibilities of a facility manager and the qualities of a facility manager. Knowledge gained in the unit should be useful in practical application as may be required in the construction process.

## **6.0 TUTOR-MARKED ASSIGNMENT**

List the qualities of a facility manager.

## **7.0 REFERENCES/FURTHER READINGS**

Awosika, Y. B. (2009). The phenomenology of spectatorship in Nigeria Soccer administration. *Journal of Kinetics and Health Education Perspectives (JOKHEP)* 1(2), 55-66 *Management of Physical education and sports*.

Bucher, A.C. & Krotee, L.M. (2002). (12th Ed.) New York: McGraw Hill.

## **UNIT 2 STAGES OF CONSTRUCTION**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Intended Learning Outcomes (ILOs)
- 3.0 Main Content
  - 3.1 Stages in construction
- 4.0 Self-Assessment Exercise(s)
- 5.0 Conclusion
- 6.0 Summary
- 7.0 References/Further Readings

### **1.0 INTRODUCTION**

The construction step of a project goes through several phases. The number of phases depends upon the scope of the project and the contracting agency.

### **2.0 INTENDED LEARNING OUTCOMES (ILOS)**

By the end of this unit, you will be able to:

- state the stages of construction
- describe the construction stage of the process.

### **3.0 MAIN CONTENT**

#### **3.1 Stages in construction**

##### **1. Pre-Construction Stage**

A meeting should be held between the contracting agency and the contractor(s) before the commencement of construction to review the contract items and make sure there is an understanding of how the job is to be undertaken. A detailed cost estimate of the project can be prepared during this stage.

##### **2. Designing Stage**

This is the stage for the preparation of Drawing Specifications. Determine method of Construction and deciding on Project Cost.

##### **3. Tendering Stage**

The purpose of this stage is to appoint a contractor who will undertake the construction work on the most suitable terms and conditions of quality and cost. Tenders are invited from the contractors for the construction

work. Contract documents are prepared to be signed by the client and the contractor.

4. **Construction Stage:** The actual construction begins at this phase, which could take several years, depending on the scope, size, and scale of the project. This stage involves the execution of construction work in line with the design, drawing, and within agreed limits of time, cost, and specified quality.

5. **Commissioning Stage:** This is the point at which the facility is handed over to the Organisation in readiness for use. The completed work is inspected to ascertain conformity to the design plan and all agreed terms.

6. **Report Stage or Briefing Stage**

It is the stage in which the performance of the structure is evaluated. Various records of actual work are kept. To prepare operating instructions and maintenance manuals. To inspect the construction work thoroughly and have any defects rectified.

### **In-Text Questions**

State the stages of construction

#### **Answer**

1. Pre-Construction stage
2. Planning stage
3. Design stage
4. Construction stage
5. Commissioning stage
6. Report stage

#### **4.0 SELF-ASSESSMENT EXERCISE(S)**

1. The stage to appoint a contractor who will undertake the construction work is known as...
  - (a) Tendering stage
  - (b) Design stage
  - (c) Construction stage
  - (d) Commissioning stage
2. The point at which the facility is handed over to the Organisation in readiness for use is described as...
  - (a) Design stage
  - (b) Construction stage
  - (c) Commissioning stage
  - (d) Report stage

3. Which of the stages involve the execution of construction work in line with the design, drawing, and within agreed limits of time, cost and specified quality.
  - (a) Pre-Construction stage
  - (b) Planning stage
  - (c) Design stage
  - (d) Construction stage
  
4. It is the stage in which the performance of the structure is evaluated.
  - (a) Pre-Construction stage
  - (b) Report stage
  - (c) Design stage
  - (d) Planning stage

#### **Answers to self-assessment test**

1. A
2. C
3. D
4. B

### **5.0 CONCLUSION**

In this unit you have read and learnt the Stages in facility construction. The acquired skills should provide you with good information on the step-by-step approach to facility construction. Links and texts provided in this unit are meant to broaden your understanding of the requirements in this unit. The in-text questions and self-Assessment exercise will give you information on your own level of understanding of this course.

### **6.0 SUMMARY**

The information and learning provided to you in this unit should enhance your understanding of the stages in facility construction.

### **7.0 REFERENCES/FURTHER READINGS**

Sawyer, T. H. (2019). Facility planning for health, physical activity, recreation, and sport. Indiana, State University.

## UNIT 3      CONSIDERATIONS IN CONSTRUCTION

### CONTENTS

- 1.0 Introduction
- 2.0 Intended Learning Outcomes (ILOs)
- 3.0 Main Content
  - 3.1 Considerations in facility construction
- 4.0 Self-Assessment Exercise(s)
- 5.0 Conclusion
- 6.0 Summary
- 7.0 References/Further Readings

### 1.0 INTRODUCTION

To achieve the goal for maximising the use of facility and operating in an efficient, safe and fair manner numerous factors need to be considered, these include access, quality, safety, sustainability and multiple-use or sharing.

### 2.0 INTENDED LEARNING OUTCOMES (ILOS)

By the end of this unit, you will be able to:

- explain the factors that should be put into consideration when constructing facilities.

### 3.0 MAIN CONTENT

#### **Considerations in Facility Construction**

When constructing facilities, it is advisable to consider the following factors:

1. The facility must be affordable for long-term use: Sports facilities are long-term assets that most of the time require a lot of money to build, operate and maintain. The design process must be considerate of this and aim to deliver the highest possible standard of facility balanced against funding realities including life-cycle costs. Facilities should be attractive and esthetically pleasing with the utilisation of good colour and design. Facilities should be easy and economical to maintain and should be durable. The best long-term outcomes are achieved by designing facilities in ways that enable them to be flexible, adaptable, and able to be re-invented to cater to changing community needs such as the ageing population. Where possible the design should accommodate potential future expansion options.

2. **Fit for purpose:** Facilities should meet the needs of users and the required recreation or sport standards for the intended levels of use, play or competition. The relative needs of the students and athletes should be recognised in the planning of facilities, scheduling for their use. ensure that the design of facilities such as sporting grounds, run-off areas and related facilities such as change rooms meet the standards required for the type and level of activities being provided.
3. **Health and safety:** Facilities and their environment should be designed, constructed and maintained following relevant codes and standards such as Occupational Health and Safety standards. It's also important to consider Child Safe, Female Friendly, and Crime Prevention through Environmental Design (CPTED) principles in the design process. Facility managers should maintain facilities to certain levels in terms of safety and access.
4. **Environmental sustainability:** Consideration should be placed on the use of energy and water-efficient products to help to reduce energy and water consumption and save cost. This should be in anticipation of the rising cost of utilities such as electricity and water which might place increased pressure on the operating and maintenance life-cycles costs of facilities.
5. **Location and access:** If a facility is to be put into maximum use, it should be sited in an easily accessible location. An Organisation may need to consider ways of making a facility more accessible such as improving car and pedestrian access, car parks, and public transport for participants.

### In-Text Questions

Give 3 factors that should be considered in Facility Construction

#### Answer

1. Health and safety
2. Location and access
3. Environmental sustainability

#### 4.0 SELF-ASSESSMENT EXERCISE(S)

1. All these factors, except **one** should be considered for facility construction.
  - (a) Location and access
  - (b) Health and safety
  - (c) Affordable for long term use
  - (d) Quantity and not quality

2. Constructed facilities should attain the following qualities except...
  - (a) Facilities should be attractive and esthetically pleasing
  - (b) Facilities should be easy and economical to maintain
  - (c) Facilities should be expensive
  - (d) Facilities should be durable
3. Which statement best describes the term “**Fit for purpose**”?
  - (a) Facilities should be sited in an easily accessible location
  - (b) Facility managers should maintain facilities to certain levels in terms of safety and access.
  - (c) Facilities should be easy and economical to maintain and should be durable
  - (d) Facilities should meet the needs of users and the required recreation or sports standards for the intended levels of use, play, or competition.

#### **Answers to self-assessment test**

1. D
2. C
3. D

### **5.0 CONCLUSION**

This unit has provided you information and learning on Considerations in facility Construction. In-text and self-assessment questions that you answered provided you with opportunities of testing your understanding of the materials in this unit. Texts attached and online links are meant to help you with needed information besides that which the unit material has given you.

### **6.0 SUMMARY**

The skills identified in this unit can be acquired and developed by you with good practice sessions. Endeavour to go through all the text and online links that have been provided to you in this unit.

### **7.0 REFERENCES/FURTHER READINGS**

Awosika, Y. B. (2009). The phenomenology of spectatorship in Nigeria Soccer administration. *Journal of Kinetics and Health Education Perspectives (JOKHEP)* 1(2), 55-66 *Management of Physical education and sports.*

Bucher, A.C. & Krotee, L.M. (2002). (12th Ed.) New York: McGraw Hill.



## MODULE 5

### Introduction

Maintenance activities include constantly putting facilities in proper operating conditions to prevent failure or degradation. Maintenance procedures and activities must be clearly understood therefore a professional in the field of facility management are required. The role of the facility manager is to ensure that the facility is operating as it should daily by completing daily inspections and conducting proactive and reactive maintenance.

Unit 1	Types of Facility Maintenance
Unit 2	The Need for Facility Maintenance
Unit 3	Stages of Facility Maintenance

## UNIT 1 TYPES OF FACILITY MAINTENANCE

### CONTENTS

1.0	Introduction
2.0	Intended Learning Outcomes (ILOs)
3.0	Main Content
3.1	Types of Maintenance
3.2	Challenges of Facility Maintenance
4.0	Self-Assessment Exercise(s)
5.0	Conclusion
6.0	Summary
7.0	References/Further Readings

### 1.0 INTRODUCTION

Maintenance activities include constantly putting facilities in proper operating conditions to prevent failure or degradation. Maintenance procedures and activities must be clearly understood therefore a professional in the field of facility management are required. The role of the facility manager is to ensure that the facility is operating as it should daily by completing daily inspections and conducting proactive and reactive maintenance.

### 2.0 INTENDED LEARNING OUTCOMES (ILOS)

By the end of this Unit, you will be able to:

- state the types of facility maintenance
- mention the challenges of maintenance.

### 3.0 MAIN CONTENT

#### 3.1 Types of Maintenance

The adage that says “a stitch in time saves nine” is most appropriate in terms of facility management. Maintenance activities are deliberate efforts to sustaining the quality of the facility and elongating their life expectancy through routine, turnaround, and corrective plans. A maintenance plan is something every establishment should have. For this study, maintenance management will be discussed under three maintenance procedures (planned or scheduled or routine or preventive, corrective, and emergency).

##### 1. **Preventive maintenance (Planned or Scheduled or Routine)**

Preventive Maintenance is predetermined to perform scheduled inspections to carry out minor adjustments, lubrication in line with the manufacturer’s recommendations with the ultimate goal of preventing spontaneous breakdowns and prolonging the life and efficiency of the facility. This is a type of maintenance procedure where an operational plan is developed from the onset to carry out routine maintenance. Preventive maintenance is time-based requiring regular tasks of maintenance **irrespective** of the condition of the facility. It is a condition-based maintenance procedure that also requires periodic inspection of the facility to check and replace when a faulty condition is observed before breakdown. Considerations should be given to all the maintenance that will need to take place within an approved interval which will include a general overhauling of the facility called turnaround maintenance possibly at the end of each year or a specified time. Projects such as the building of walls or the complete painting of areas could also come under scheduled maintenance.

##### 2. **Corrective Maintenance (Unplanned Maintenance)**

Corrective maintenance happens when a facility or a part of the facility is broken and needs to be fixed or replaced. Corrective maintenance is a failure-driven maintenance procedure that takes place when a facility is used until it unexpected breakdown or malfunctioned. Sometimes this type of maintenance can also fall under emergency maintenance, but not always.

##### 3. **Emergency Maintenance**

Emergency maintenance is when something is broken unexpectedly and needs to be fixed with immediate effect. At times some facilities might pose immediate problems requiring very urgent attention such as in flooding situations, windstorms or other natural disasters. The timely replacement or maintenance in an emergency could sometimes require complete shut down of the installation. This type of maintenance is not

carried out often in the school. It happens once a while. Take for example, the wall of a dormitory may crack, requiring urgent repairs to avoid total breakdown of the building. Also, the engine of a machine may start to produce a cracking sound, which calls for emergency repair to avoid engine knock.



Facility Maintenance

### **3.2 Challenges to Maintenance**

Some of the several perceived obstacles to facility maintenance which are possible causes of building collapse include:

- a. Lack of appropriate in-house experience might result in absence of coordination between the professional bodies and the local town planning authority.
- b. Lack of suitable manpower can manifest in lack of adherence to specifications by the unqualified and unskilled personnel.
- c. Improper Design can manifest in structural designs and details handled by quacks.
- d. Lack of proper supervision by professionals which at times may lead to the use of substandard building materials and in the exhibition of poor and bad construction practices.
- e. Inadequate enforcement of the existing enabling building regulations can manifest in illegal conversion of buildings in deliberate disobedience of town planning regulations by developers which might lead to structural deficiencies. This may arise due to the possible compromising attitude of some workers of the town planning authority.



### Building Collapse

#### In-Text Questions

1. State 3 types of facility maintenance
2. Give 2 Challenges of maintenance

#### Answer

- 1
  - (a) Planned or scheduled maintenance
  - (b) Routine or preventive maintenance
  - (c) Corrective maintenance
- 2
  - (a) Lack of proper supervision by professionals
  - (b) Inadequate enforcement of the existing enabling building regulations.

#### 4.0 SELF-ASSESSMENT EXERCISE(S)

Attempt the following questions

1. One of these is **not** a type of facility maintenance
  - (a) Preventive Maintenance
  - (b) Instant Maintenance
  - (c) Corrective Maintenance
  - (d) Emergency Maintenance
2. A failure-driven maintenance procedure that takes place when a facility is used until it unexpected breakdown or malfunctioned is termed...
  - (a) Preventive Maintenance
  - (b) Instant Maintenance
  - (c) Corrective Maintenance
  - (d) Emergency Maintenance
3. The maintenance procedure where an operational plan is developed from the onset to carry out routine maintenance is known as
  - (a) Preventive Maintenance
  - (b) Instant Maintenance
  - (c) Corrective Maintenance
  - (d) Emergency Maintenance

4. Some of the several perceived obstacles to facility maintenance which are possible causes of building collapse include the following except:
  - (a) Lack of appropriate in-house experience might result in absence of coordination between the professional bodies and the local town planning authority.
  - (b) Lack of suitable manpower can manifest in lack of adherence to specifications by the unqualified and unskilled personnel.
  - (c) Proper supervision of facilities as a management procedure.
  - (d) Improper Design can manifest in structural designs and details handled by quacks.

### **Answers to self-assessment test**

1. B
2. C
3. A
4. C.

## **5.0 CONCLUSION**

In this unit you have learnt about the types of facility maintenance and the challenges that might be faced in facility maintenance.

## **6.0 SUMMARY**

In this unit, you have learnt types of facility maintenance and the challenges that might be faced in facility maintenance. The in-text questions and Self-Assessment Exercise you attempted were meant to provide you opportunities of testing your understanding and the amount of learning you have achieved after having studied this unit.

The online links and texts that have been provided you were meant to broaden your knowledge and understanding required in this Unit.

## **1.0 REFERENCES/FURTHER READINGS**

- Crompton, J.L. (2005). Economic impact analysis of sports facilities and events: Eleven Sources of misapplication. *Journal of Sport Management*. 9:14-35.
- Mobley, Keith R. & Higgins, Lindley R. & Wikoff, Darrin J. (2008) *Maintenance Engineering Handbook McGraw-Hill Professional, Seventh Edition.*

## **UNIT 2 THE NEED FOR FACILITY MAINTENANCE**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Intended Learning Outcomes (ILOs)
- 3.0 Main Content
  - 3.1 The need for facility maintenance
  - 3.2 The functions of Maintenance Unit in an Organisation
- 4.0 Self-Assessment Exercise(s)
- 5.0 Conclusion
- 6.0 Summary
- 7.0 References/Further Readings

### **1.0 INTRODUCTION**

The maintenance plan to be put in place regarding facilities should differ from structure to structure. Different buildings require different schedules. For instance, a school requires different maintenance activities when compared to a factory or a sports complex maintenance plan. If proper planning and construction are done at the onset, then maintenance should be made easier. It could be very challenging to see a new facility running into defects due to poor maintenance management.

### **2.0 INTENDED LEARNING OUTCOMES (ILOS)**

By the end of this unit, you should be able to:

- explain the need for maintenance
- itemise the duties of maintenance unit in an organisation.

### **3.0 MAIN CONTENT**

#### **3.1 Need for maintenance (Why facility maintenance plans?)**

Good facilities maintenance can deliver greater adaptability, flexibility, and sustainability for your organisation. It ensures efficient and smooth business operations that are not often interrupted by a diverse range of technical difficulties. To have effective facility maintenance, a comprehensive maintenance plan must outline all the phases of maintenance for all the facility's assets, such as the building systems and the structural parts. Putting up an effective facility maintenance plan is very essential for the following reasons:

- a. To protect the investment in the installations. Neglect of maintenance of fixed assets or facilities can lead to significant losses of those assets.

- b. Control the maintenance cost and also reduces energy output costs
- c. Increase the life span of the facilities. Incorrect maintenance procedures can shorten the life of systems and components and cause premature failure
- d. Reduce safety problems for the users. A well-maintained facility creates a safe working environment. The regularly scheduled care and upkeep of a company help employees and clients to be safe.
- e. Provide better services to the users
- f. Provide higher market value services
- g. Provide a better environment for users
- h. Provide smoother and continuous running of the Organisation.  
Makes all business functions run smoothly and efficiently

### In-Text Questions

By the end of this unit, you should be able to:

1. Explain 4 reasons why a facility maintenance plan is necessary.

#### Answer

- a. It provides better services to the users
- b. It provides higher market value services
- c. It provides a better environment for users
- d. It provides smoother and continuous running of the Organisation.  
Makes all business functions run smoothly and efficiently.

### 3.2 The functions of maintenance unit in an Organisation

Considering the place of maintenance in the building and construction industries, it is expedient for every institution or Organisation to set up a maintenance unit to perform the following duties

- a. Designing and Preparation of Maintenance Schedule
- b. Obtaining of Maintenance request from different departments
- c. Repair of defective facilities identified
- d. Taking records of inventories of all assets or facilities
- e. Introduce check list to prevent breakdown.
- f. Programming daily, weekly, monthly and yearly maintenance plan
- g. Setting work priority
- h. Setting facility priority



Facility Maintenance Process

**In-Text Questions**

1. State 4 functions of maintenance unit in an Organisation

**Answer**

- a. Obtaining maintenance requests from different departments
- b. Repair of defective facilities identified
- c. Taking records of inventories of all assets or facilities
- d. Introduce a check list to prevent breakdown.

**4.0 SELF-ASSESSMENT EXERCISE(S)**

Attempt the following questions

1. All the following **but one** is a reason for facility maintenance
  - (a) To protect the investment in the installations.
  - (b) Control the maintenance cost and also reduces energy output costs
  - (c) To prolong the life span of the facilities.
  - (d) To increase the cost of investment
2. One of the following is not a function of a maintenance unit in an Organisation
  - a. Designing and Preparation of Maintenance Schedule
  - b. Constructing facilities
  - c. Repair of defective facilities identified
  - d. Taking records of inventories of all assets or facilities
3. Which of the following is a function of the Maintenance Unit?
  - (a) Programming daily, weekly, monthly, and yearly maintenance plan
  - (b) Planning for facility construction
  - (c) Designing a building plan
  - (d) Preparing the site for the project location.

**Answers to a self-assessment test**

1. D
2. B
3. A

**5.0 CONCLUSION**

In this unit, you have read and learned about the need for maintenance and the functions of a maintenance unit in an Organisation. The information and knowledge you acquired from this unit and consultations you made going over texts and looking over online links were meant to enhance your understanding of the maintenance process. Your performance on the in-text questions, discussion question, and self-assessment exercise will indicate to you your strength and weakness in the unit. You are therefore encouraged to go over the unit with more careful detail attention.



## 6.0 SUMMARY

In this unit, you have successfully learnt what is needed that you know concerning the need for maintenance and the functions of maintenance unit in an Organisation.

## 7.0 REFERENCES/FURTHER READINGS

Gabriela, A. Tenório, D. & Alberto Casado, L. J. (2019) "Building maintenance management activities in a public institution", *Engineering, Construction and Architectural Management*, 26 (1), 85-103,

Garg, A., Deshmukh, S.G. (2006). "Maintenance management: literature review and directions", *Journal of Quality in Maintenance Engineering*, 12 (3) 205 – 238

Marek Potkány\*, Róbert Kováčik (2015) The Complexity of Offered FM services in the Slovak Business Environment *Economics and Finance* 34 (2015) 535 – 541.

## **UNIT 3 STAGES OF FACILITY MAINTENANCE**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Intended Learning Outcomes (ILOs)
- 3.0 Main Content
  - 3.1 Stages of Facility Maintenance
  - 3.2 The Functional areas of Maintenance Management
- 4.0 Self-Assessment Exercise(s)
- 5.0 Conclusion
- 6.0 Summary
- 7.0 References/Further Readings

### **1.0 INTRODUCTION**

To ensure the efficient and smooth running of business operations that are not usually disturbed by a diverse range of technical difficulties, some steps need to be taken. These steps are discussed as stages of facility maintenance. The maintenance cannot be carried out in an improvised way; it is fundamental to face it as a technical service that demands adequate training in the execution. Maintenance without technical criteria fails.

### **2.0 INTENDED LEARNING OUTCOMES (ILOS)**

By the end of this unit, you will be able to:

- state the stages of facility maintenance
- explain the need for facility maintenance policy.

### **3.0 MAIN CONTENT**

#### **3.1 Stages of Facility Maintenance**

Stages of facility maintenance may include but are not limited to the following steps:

- a. Formulation of plan and cost estimation for maintenance of facilities.
- b. Design and approve facilities maintenance policy which outlines the roles and responsibilities of property and facility, and define funding allocation responsibilities to achieve effective maintenance of assets.
- c. Conducting monitoring of facilities that will need maintenance.
- d. Quality inspection when necessary. This will expose areas calling for prompt maintenance.

- e. The actual Facility maintenance: Maintenance is a tool to maintain the building functionality and it can be characterised as interventions made on the property and its parts, to preserve or recover its functionality, this will require both periodic and unscheduled repair.
- f. Prepare and manage facility maintenance records: The documentation structure and recording information should be designed to provide evidence of maintenance program management. The documentation of the maintenance program must include a manual for use, operation, and maintenance of the buildings, a maintenance program, inspection reports, a register of maintenance services performed, technical service responsibility documents, among others. Records should be kept of the effective implementation of the maintenance program, planning, inspections, and effective maintenance, as well as indicators that evaluate the efficiency of the services performed. According to Siqueira (2014), keeping records in an organised way is an important tool in planning and carrying out future maintenance activities.

### 3.2 The Functional areas of Maintenance Management

The summaries of facility maintenance principles include the following:

1. **Budgeting**: Setting priorities for resource allocation
2. **Initiating** - receiving and reviewing requests for work to be performed by skilled people
3. **Planning** - work assignments and material needs for the work orders
4. **Scheduling** work requests
5. **Executing** work request
6. **Reporting** - measuring performance, including customer satisfaction surveys

#### In-Text Questions

1. List 6 functional areas of maintenance management

#### Answer

1. (a) Budgeting  
(b) Initiating  
(c) Planning  
(d) Scheduling  
(e) Executing  
(F Reporting

#### 4.0 SELF-ASSESSMENT EXERCISE(S)

1. Stages of facility maintenance may include the following steps except:
  - (a) Formulation of plan and cost estimation for maintenance of facilities.
  - (b) Construction of facilities for use
  - (c) Design and approve facilities maintenance policy which outlines the roles and responsibilities of property and facility.
  - (d) Conducting monitoring of facilities that will need maintenance.
2. One of these is **not** a functional area of Maintenance Management
  - (a) Budgeting
  - (b) Initiating
  - (c) Planning
  - (d) Constructing
3. Documentation of the maintenance program must include the following except:
  - (a) Drawing plan
  - (b) Operation and maintenance of the buildings,
  - (c) A register of maintenance services performed
  - (d) Inspection reports.

#### Answers to self-assessment test

1. B
2. D
3. A

#### 5.0 CONCLUSION

This unit has provided you information on stages of maintenance and the reasons for maintenance policy. Information you obtain from the unit is meant to enrich your knowledge and understanding of this important aspect of stages of maintenance and the reasons for maintenance policy. The in-text question, discussion question, and self-assessment exercise should reinforce your knowledge of and what may be needed by you to understand facility maintenance.

#### 6.0 SUMMARY

In this unit which you are completing materials, you read had emphasised the stages of maintenance and the reasons for maintenance policy. The texts and online links provided in the unit are meant to support your learning and broaden your sources of knowledge of facility maintenance.

You are encouraged to refer to these texts and online links with good attention.

## 7.0 REFERENCES/FURTHER READINGS

Gabriela, A. Tenório, D. & Alberto Casado, L. J. (2019). "Building maintenance management activities in a public institution", *Engineering, Construction and Architectural Management*, 26 (1), 85-103,

Garg, A., Deshmukh, S.G. (2006). "Maintenance management: literature review and directions", *Journal of Quality in Maintenance Engineering*, 12 (3) 205 – 238

Marek Potkány\*, Róbert Kováčik (2015). The Complexity of Offered FM services in the Slovak Business Environment *Economics and Finance* 34 (2015) 535 – 541.

## MODULE 6

### Introduction

Facility supervision has been established as an effective intervention in improving the performance and efficiency of sports facilities. Supervision often includes conducting basic administration skills and making sure that personnel, policies, and other internal regulations are taken into cognisance. Managing a sport and recreation facility can be a difficult and time-consuming task. Organisations that are aware of the most efficient and equitable ways to manage sport and recreation facilities have a greater ability to control the use of their facility thereby improving the life span of such buildings.

Unit 1	Principles of Supervision of Facilities
Unit 2	Types of Supervision
Unit 3	Facility Management

## UNIT 1 PRINCIPLES OF SUPERVISION OF FACILITIES

### CONTENTS

- 1.0 Introduction
- 2.0 Intended Learning Outcomes (ILOs)
- 3.0 Main Content
- 4.0 Self-Assessment Exercise(s)
- 5.0 Conclusion
- 6.0 Summary
- 7.0 References/Further Readings

### 1.0 INTRODUCTION

Supervision involves conducting basic management skills as in decision making, problem-solving, planning, delegation and meeting management, organising teams, noticing the need for and designing new job roles in the group, hiring new employees, training new employees and employee performance management.

### 2.0 INTENDED LEARNING OUTCOMES (ILOS)

By the end of this unit, you will be able to:

- state the types of inspections
- explain the types of quality inspections during construction.

### 3.0 MAIN CONTENT

Facility supervision ensures that work is effectively performed. The importance of facility supervision in the administration of an Organisation is reflected in decision making, problem-solving, and planning. Facility supervisor's report is useful to the management in taking vital decisions, organising teams, noticing the need for and designing new job roles in the workplace, hiring and training new employees, employee performance management such as setting goals, observing and giving feedback, addressing performance issues, firing employees and other administrative responsibilities. Site inspections are a set of regular activities to check and verify the on-field compliance including Safety Standards, working conditions, and other critical areas of worksite. Facility inspections help prevent incidents and injuries. Through a critical examination of the facility, inspections help to identify and record hazards for corrective action. Health and safety committees can help plan, conduct, report, and monitor inspections.

#### Types of Quality Inspections during construction

1. **Pre-production/Construction Inspection.** During the pre-production phase, raw materials should be tested before entering production. Building materials should be inspected for compliance before use.
2. **On the spot inspection.** Additional inspections should take place during various stages of production.



3. **Post- Production/Construction Or Final Inspection:** This inspection exercise is carried out at the end of the construction

process before the handing over phase. The inspector writes the final report on the state of the completed job. He recommends whether the project has passed the final stage or otherwise.

#### **4.0 SELF-ASSESSMENT EXERCISE(S)**

1. Which of these is not a type of inspection in the production or construction industry?
  - (a) Automobile inspection
  - (b) Pre-Construction inspection
  - (c) On-The-Spot inspection
  - (d) Post-Construction Inspection
2. Which of these inspections is carried out at the end of the construction work?
  - (e) Automobile inspection
  - (f) Pre-Construction inspection
  - (g) On-The-Spot inspection
  - (h) Post-Construction Inspection

#### **Answers to self-assessment test**

1. **A**
2. **D**

#### **5.0 CONCLUSION**

Having read this course and completed the assessment and self-assessment test it is assumed that you have attained an understanding of the types of inspection.

#### **6.0 SUMMARY**

In this Unit, you have learned the types of inspection. The assessment and self-assessment exercise have been provided to enable you to understand your rating of the understanding and learning you achieved reading this material in this Unit. Online links have also been provided to broaden your understanding of the learning required in this Unit.

#### **7.0 REFERENCES/FURTHER READINGS**

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## UNIT 2      TYPES OF SUPERVISION

### CONTENTS

- 1.0 Introduction
- 2.0 Intended Learning Outcomes (ILOs)
- 3.0 Main Content
- 4.0 Self-Assessment Exercise(s)
- 5.0 Conclusion
- 6.0 Summary
- 7.0 References/Further Readings

### 1.0 INTRODUCTION

As a major component of the maintenance program, inspections include tasks that check the condition of facilities and determine what tools, materials, and labour are required to service them. A maintenance inspection is a process of evaluating the condition of installations or machines. The purpose of a maintenance inspection is to determine what is required to keep the facilities in good working condition.

### 2.0 INTENDED LEARNING OUTCOMES (ILOS)

By the end of this unit, you will be able to:

- list different types of facility inspections
- explain the concept of routine inspection
- mention the types of maintenance inspection.

### 3.0 MAIN CONTENT

#### Types of inspection

1. **Routine inspection:** Routine inspection is daily supervision of facilities to quickly find out any unusual occurrences and defects on the facilities. It involves on-the-spot assessment while walking in and around the facilities.
2. **Periodic inspection:** Periodic inspection involves a well-scheduled action plan designed to survey and diagnose deterioration and defects and also to select the suitable repair methods for light damages and deteriorations. It is carried out at a fixed but regular interval which could vary according to the age and inventory of facilities. The periodic inspection builds the foundation for the planning of maintenance and repair works. This assessment may serve as the basis for establishing appropriate

levels of funding required to reduce and ultimately eliminate excess.

3. **Unscheduled inspection:** Unscheduled inspection is applied to the following circumstances; The Project for Capacity Enhancement in Construction of Quality Assurance: To survey and evaluate the effects of unexpected incidents such as floods, strong wind, fires, typhoons, earthquakes, and other natural disasters which are given to building facilities.
4. **Detailed surveys:** Detailed survey and design are applied to the following situations; To further specify causes of structural defects and damages; To find out the most suitable repair works for the damages; To evaluate the performance of repair works; To survey unidentified incidents arising after repair works and a final inspection; To ensure structural safety when facilities are to be used with loading conditions more than the design conditions; To evaluate structural safety when facilities are to be used more than design periods. The survey and design are in general carried out by qualified engineers

#### **Types of Maintenance inspection**

- a. Failure finding inspection: This inspection checks the operation of protective devices that cannot be readily checked unless a primary system fails.
- b. Lighting inspections: Bulbs should be checked regularly and replaced in a group when they begin to fail for efficiency.
- c. Building interior inspections: Check walls, ceilings, and floors for damage, leaks, or other deterioration.
- d. Building exterior inspections: Check paint, walls, windows, and doors for damage regularly as well as any undergrowth that may damage the walls or foundation. Inspect the roof, drains, and gutters. Inspect sidewalks, driveways, and railings for hazards and damage.
- e. Plumbing inspection: Check for leaks, noises, and damage. Water boosters, water chillers, condenser fans, and circulation pumps must be lubricated. Sewage and sump pumps should be inspected regularly and replaced as needed.

#### **In-Text Questions**

1. list different types of facility inspections
2. Explain the concept of routine inspection.

#### **Answer**

1. (a) Routine inspection
- (b) Periodic inspection

- (c) Unscheduled inspection
- (d) Detailed inspection
- 2. Routine inspection is a daily supervision of facilities to quickly find out any unusual occurrences and defects on the facilities. It involves on-the-spot assessment while walking in and around the facilities.

#### **4.0 SELF-ASSESSMENT EXERCISE(S)**

- 1. Which of these is not a type of inspection?
  - (a) Routine Inspection
  - (b) Turnaround Inspection
  - (c) Group Inspection
  - (d) Periodic Inspection
- 2. Which of these inspections is daily supervision of facilities to quickly find out any unusual occurrences and defects on the facilities?
  - (a) Routine Inspection
  - (b) Turnaround Inspection
  - (c) Group Inspection
  - (d) Periodic Inspection
- 3. Detailed survey and design are applied to the following situations except:
  - (a) To further specify causes of structural defects and damages
  - (b) To find out the most suitable repair works for the damages
  - (c) To evaluate the performance of repair works
  - (d) Not to ensure structural safety when facilities are to be used with loading conditions more than the design conditions.

#### **Answer to Self-Assessment Exercise**

- 1. C
- 2. A
- 3. D

#### **5.0 CONCLUSION**

The information provided to you in the unit and the knowledge you've acquired from texts and online links should enable you to describe, demonstrate and explain activities in the unit. The in-text questions you answered, the discussion question attempted and the self-assessment exercise untaken will indicate to you the amount of learning you acquired in this unit.

## **6.0 SUMMARY**

In this unit, you can learn about the types of facility supervision. Your reading through the unit carefully and making consultations with attached texts and online links should have broadened your understanding of part details you need learning facility supervision. You may need to go over the unit material for better understanding.

## **7.0 REFERENCES/FURTHER READINGS**

<https://naicc.org/wp/wpcontent/uploads/2012/09/Howtoconductinternalfieldfacilityinspectionnotes.pdf>

## **UNIT 3 FACILITY MANAGEMENT (FM)**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Intended Learning Outcomes (ILOs)
- 3.0 Main Content
  - 3.1 Facility Management defined
- 4.0 Self-Assessment Exercise(s)
- 5.0 Conclusion
- 6.0 Summary
- 7.0 References/Further Readings

### **1.0 INTRODUCTION**

To achieve the organisational goal, tools are required to function. These tools which could be in form of buildings, plants, or installations are known as facilities. Facility management is an effective form of outreach business management that aims to provide relevant, cost-effective amenities to support the main business activities and achieving the goal of the Organisation optimally. As important as FM is, an Organisation might find it very difficult to finance an autonomous FM unit or department; the outsourcing principle might be adopted. This is a situation where external professional bodies are saddled with the responsibility of FM within an agreed term. This could be partial or complete depending on the financial strength and the objectives of the establishment.

### **2.0 INTENDED LEARNING OUTCOMES (ILOS)**

By the end of this Unit, you will be able to:

- give the meaning of facility management
- explain who a facility manager is
- list the duties of a facility manager
- discuss the needs for facility outsourcing.

### **3.0 MAIN CONTENT**

#### **3.1 Meaning of Facility Management**

Facility Management is responsible for harmonising all efforts related to planning, design, and management of structures and their systems, to improve the organisation's ability to compete favourably in the global world (Becker 1990). FM focuses attention on the coordination and delivery of the business production (Alexander, 1996), Curcio (2003) defines FM as the Integrated Management services and processes, which

are not included in the main business, but which are necessary for the realisation of the organisational goal. (Guizzi, G., Miele, D., Carlini, R 2012) The International Facility Management Association defines facility management as the practices of coordinating the physical workplace with the people and work of the organisation (IFMA, 2003). FM is an effective form of outreach business management which aims to provide relevant, cost-effective services to support the main business activities (core business) and allow them to optimise (Vysko il, 2009).



FM- Definition [imfa.org](http://imfa.org)

### **Who is a Facility Manager?**

A facilities manager is the individual charged with the responsibility of taking care of the day-to-day maintenance, upgrades, and management of plants, buildings, installations, or facilities of an Organisation. They are responsible for ensuring everything that has to do with the physical infrastructure of the business, company, or institution is in sustained working condition. Facility Manager is a job role that is responsible for making sure that buildings and their services meet the needs of the people that work in them. Facilities managers are accountable for services such as cleaning, security, and parking, to make sure the surrounding environment is in a suitable condition to work. He can be described as the invisible hand that goes around the office making sure everything works out well.

### **Duties of a Facility Manager**

Facilities managers essentially look after all of the services that make a business run efficiently. Their responsibilities include but are not limited to:

1. Overseeing and agreeing on contracts and providers for services including security, parking, Cleaning, technology, and many other tasks.

2. Supervising tasks such as cleaning, maintenance, grounds, and security personnel.
3. Ensuring that basic facilities, such as utilities, are well-maintained.
4. Managing budgets, advising businesses, and ensuring cost-effectiveness.
5. Ensuring that facilities meet government regulations and environmental, health and security standards.
6. Overseeing building projects, renovations, or refurbishments.
7. Drafting reports and making written recommendations.

### **Qualities of an outstanding Facility Manager**

To be a successful facility manager, the personnel should possess most of the following skills: occupancy and human factors, operations and maintenance, sustainability, facility information and technology management, risk management, communication, performance, quality leadership, and strategy. While each of these skills is important, the combination of all can make a difference between excellence or otherwise.

In a situation where the need for FM is temporary rather than a recurring need and bearing in mind that finding personalities with the aforementioned qualities might be very difficult, then considering facility management outsourcing will be desirable. Outsourcing in facilities management involves turning over the complete management and decision-making responsibility of an operation to somebody outside the organisation. The main reason for outsourcing is not only for the quality of service and cost-effectiveness but also the reliability and guaranteed safety on the part of the FM service providers who are professionals in the field.

### **In-Text Questions**

1. Give the meaning of facility management
2. List 3 duties of a facility manager.

#### **Answer**

1. facility management as the practices of coordinating the physical workplace with the people and work of the organisation
2. (a) Overseeing and agreeing on contracts and providers for services including security, parking, cleaning, technology, and many other tasks.  
(b) Supervising tasks such as cleaning, maintenance, grounds, and security personnel.  
(c) Ensuring that basic facilities, such as utilities, are well-maintained.

### **Facility Management Outsourcing**

Outsourcing is a FM principle that transfers support activities of a company to an external provider. It simply means sourcing from outside.

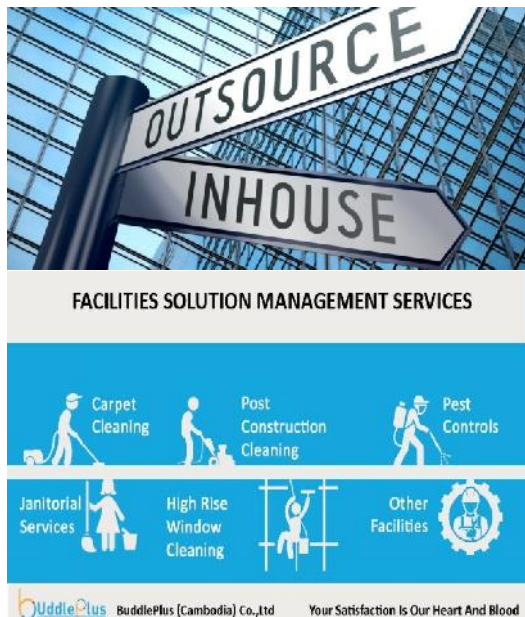
In the orthodox management arrangement, which creates an autonomous unit that concentrates solely on the performance of the facilities and services of the building such as the maintenance where they make sure all the facilities are functioning all the time. This practice in most cases might be capital intensive. FM outsourcing can be used to help maximise returns on investment and establish long-term competitive advantages in the business world. FM outsourcing is brought about by economic crisis causing stagnation in the construction industry and decrease in the customers' demand for construction. It is a form of cost-saving device in facility maintenance procedure. Outsourcing of facility management includes not only technical management and administration of buildings, but also maintenance and special inspection on facilities. The main reason for facility management outsourcing is maximising the costs of administering and improving the quality of services delivered. Successful and well-organised outsourcing can bring about profitability, improve productivity, reduce business risks, growing competitiveness and let companies focus their efforts on their primary business and key competitive advantage

### **Considerations for Facility Management Outsourcing**

There are many questions to be answered before considering deciding on the need for facility management outsourcing. These include:

1. Is there a competitive advantage of doing the task in-house? As long as the task or service does not support the business's main product, outsourcing can be cost-efficient and of great advantage.
2. Is the job short-term or recurring? Does the task need a one-time event? Then outsourcing the task to a third party, who has the expertise and can deliver a professional quality output can be a better option than hiring a new team of people that possess the skills the Organisation desire.
3. Can the task be handled more efficiently (about the objectives of the Organisation) externally? Expertise and experience in completing tasks often result in a better-quality output and tasks can be completed faster and more effectively.
4. Are the costs of the service lower than what it would cost in time and manpower to do in-house? If an external body can perform the task with a better outcome and for a lower cost than what can be done internally then, outsourcing can be a great way to improve the organisation's output.





## Facility Outsourcing

### In-Text Questions

1. What is the major reason for outsourcing facility management?
2. What is facility management outsourcing?

### Answer

1. For quality output and to save cost.
2. It simply means sourcing the management of the facility from outside.

### 4.0 SELF-ASSESSMENT EXERCISE(S)

1. The responsibilities of a Facility Manager include all of the following except:
  - (a) Overseeing and agreeing on contracts and providers for services
  - (b) Supervising tasks such as cleaning, maintenance, grounds and security personnel.
  - (c) Ensuring that basic facilities, such as utilities, are well-maintained
  - (d) Overseeing the aesthetic quality of the drawing plan
2. Which of these questions is not relevant when deciding on the need for facility management outsourcing?
  - (a) Is there a competitive advantage of doing the task in-house?
  - (b) Is the job short-term or recurring?
  - (c) Can the task be handled more efficiently externally?
  - (d) Is the construction done to specification?
3. To be a successful facility manager, the personnel should possess the following skills except:
  - (a) Drawing plan designer
  - (b) Operations and maintenance
  - (c) Facility information and technology management
  - (d) Risk management

**Answers to self-assessment test**

1. D
2. D
3. A

**5.0 CONCLUSION**

The information provided to you in the unit and the knowledge you have acquired from texts and online links should enable you to describe, demonstrate and explain activities in the unit. The in-text questions you answered, the discussion question attempted and the self-assessment exercise undertaken will indicate to you the amount of learning you acquired in this unit.

**6.0 SUMMARY**

In this unit, you can acquire a clear understanding of facility management, the qualities of a facility manager, and the need for facility outsourcing. Your reading through the unit carefully and making consultations with attached texts and online links should have broadened your understanding of part details you need learning facility provision. You may need to go over the unit material for better understanding.

**7.0 REFERENCES/FURTHER READINGS**

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