

COURSE CODE:	HRT 202
COURSE TITLE:	INTRODUCTION TO LANDSCAPING
NUMBER OF UNITS:	2 Units
COURSE DURATION:	2 Hours / Week

COURSE DETAILS:

Course Coordinator:	OLUBODE, O.O., B.Sc. Agric, M. Sc. Agric., PhD
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Other Lecturers:	OLOSUNDE, O.M. B. Agric., M. Agric.

COURSE CONTENT:

Definition of landscaping, Natural versus man-made landscape, Scope and historical sketches of landscaping, Needs for landscaping: to enhance property beauty and value; to provide screening effect etc. Types of landscaping: Institutional, private property, industrial, parks and recreational area landscaping. Elements of landscaping: colour, texture, form, etc. Principles of landscape design, selection criteria for plants and paving. Review of soft and hard landscaping.

Practical: Identification of tropical and subtropical ornamental plants. Visit to places of interest, Plan reading and translation.

COURSE REQUIREMENTS:

A compulsory course for FWM and AQ & FM students of COLERM, an external course anchored in Horticulture Department. Students are expected to participate in all course activities and have a minimum of 75% attendance to be able to write the final examination.

READING LIST:

- Jack E. Ingels. 1994. Ornamental Horticulture: Science, operation and management. Delmer Publishers Inc., New York, U.S.A.
- Roger Bonnent. 1991. Amenity Horticulture, Macmillan Press Ltd., London.
- Simond Bell. 1993. Elements of visual designs in landscape. E & Fn Spon, London.
- Van der Zanden A.M. and Rochie, S.N. 2007. Landscape design: Theory and Application. Thompson Delmer Learning, Canada.

- a **natural** landscape is one that is unaffected by human activity
- a **sub-natural** landscape is one where if human activity was removed it would go back to a normal state
- a **semi-natural** landscape is one that has been drastically modified by human activity but has some natural elements left intact
- an **agricultural** landscape is one that has been totally altered and arranged by human activity - very little if any naturalness is left

Examples of natural landscape in Nigeria are; natural surrounding such as forest or desert, rocks (Olumo rock, Zuma rock), Erin Ijesa water falls, Ikogusi warm / cold spring, plateau in Jos, Mambila etc.

Artificial Landscape: The use of artificially made plants (synthetic or otherwise) for landscaping of outdoor environment. Though, it will not and cannot replace the natural plants in their effects and functions on the landscape, but could also add to the beauty of the environment. It has the advantage of low maintenance in terms of watering, fertilizer application, mowing incase of lawns and turfs, trimming/pruning and so on. Other items in artificial designs include the use of art works, e.g. sculpture (UNAAB Olumo model), concrete benches and tables, water bodies such as water fountains, artificial springs, etc.

D. Scope and historical sketches of landscaping

Scope: Landscape by its very nature encompasses all other specialist sections of Amenity horticulture in one form or the other. It includes the design, construction, maintenance and management of landscape features. Knowledge of floriculture, landscape architecture, and engineering are usually important.

History: Landscaping is an important sector which has expanded and still expanding in recent years in Nigeria. Despite this development, it is by no means comparable to what is obtainable in the developed countries in terms of development, quality, patronage and boom experienced in the landscape horticulture industry.

In Nigeria, from the time immemorial, people consciously or unconsciously add physiographic and environmental characteristics to the land around them either for aesthetic gratification and or environmental enrichment and protection.

Traditionally, people keep garden and trees around their buildings. Though, the experience of the colonial era did little to influence creation and preservation of beauty in the surroundings as it was in Francophone countries.

Nevertheless, the inception of colonialism changed the trends of events as concerted effort were made to formally landscape some public buildings, government reservation areas (GRAs), institutions of higher learning, and sport fields which marked the beginning of organized/formal landscaping in Nigeria. Missionaries (Christian) also established plants in churches and schools. Some individual copied this idea and planted some ornamental plants in their surroundings.

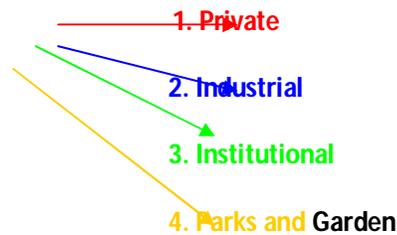
E. Reasons for landscaping:

Some of the reasons why landscaping is important are;

1. Aesthetic/ Beautification of environment
2. Engineering purpose

3. Architectural purpose
4. Biological purpose
5. Ecological purpose
6. Economic purpose
7. Social purpose
8. Nutritional / Medicinal purpose
9. Environmental control in prevention of hazards
10. Urban forestry

F. Types of landscaping:



1. Private property/residential landscaping: Landscaping of personal residential properties like a flat, bungalow, duplex, estate etc. Usually, plants of different good qualities are used as much as possible for the enjoyment of owner(s). It is important to landscape to the taste of the clients even if expensive materials will be used.

2. Industrial landscaping: It involves the establishment of plants and hardscapes within the industrial estate/area e.g Agbara industrial estate, Nigeria Breweries Ltd, Portland/Lafage cement company, etc. When landscaping for factories/industrial centre, study kind of activities in each section e.g manufacturing area with many peoples, vehicles and materials-grassing the whole area dotted with spot planting will be appropriate.

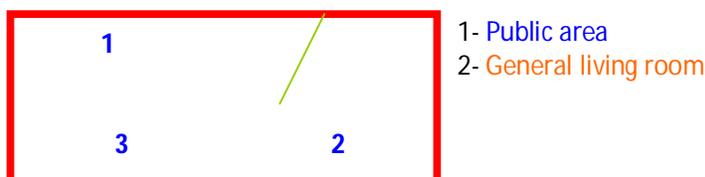
Though, hotels can also be regarded as industrial landscaping because it is not meant for a single family, but for the general public and for commercial purpose. However, in actual execution of the project it treated like private property because of requirement for high taste.

3. Institutional landscaping: Landscaping that involves all sorts of institutions- universities, colleges, polytechnics, hospitals, research institutes, barracks etc. Usually it is meant for all categories of users, i.e. general public of all age category- children, adolescents, adults, women, men, students, lecturers, non-academic staff, scientist etc. Institutional landscaping must be different from others because it is not only for recreation, picnic but also for instructional purpose (educational)

4. Recreational landscaping: It involves landscaping recreational arenas (polo ground, parks and gardens, football pitches, game villages etc) for adults and children. It has special inclusions such as restaurant, water fountains, focal plants, green lawns and other areas for social like picnic, marriages, honey moon, film shooting. Nowadays, ICT and photocopy centre have been added.

G. Use areas in Landscape designs

Using the 'Indoor room concept' to describe the Outdoor





- 3- Service area
- 4- Private living room

Walls- hedges, avenue trees,
Ceilings- shade trees, canopies, etc.
Floors- lawns, foundation plants, concrete floors and walk ways, roads with interlocking blocks or asphalt.

i.) Use areas

1. **Public area** – usually the front part of the property accessibility to visitors
2. **General living room** – an area of the home that joins the public area, service room and private room
3. **Service area** – accessible to only the occupants
4. **Private living room** – an area for rest and occupies the rear of the property and not accessible to outsiders

ii.) Components of the outdoor room:

- a. **Walls** - defines the limit and shapes of the out door room, direct traffic through the landscape (hedges, avenue trees), provides full or partial privacy (), provide security (thorny plants e.g. boungavalia spp.), etc.
- b. **Ceilings** – defines the upper limit of the outdoor room, provide full or partial shade, provide privacy from overhead viewers, etc.
- c. **Floors** – defines the base line of the outdoor room, absorbs shock or impact of traffic, e.g. turfs / lawn, paving, ground covers,

H. Site Survey and Analysis

The objects of survey refer to measurable quantities and qualities on the site. They fall into 3 primary areas:

- 1.) Collection of data- from 3 sources
 - i) site
 - ii) recorded data
 - iii) information from client, e.g. composition of the family, hobbies and special interests, and frequency and style of outdoor entertainment
- 2.) Site analysis or survey (see below)
- 3.) Visual characteristics of the site

-After the survey, then present the bill of quantities

-Analysis: consists of breaking down of all the available matter into components

Data collection

1. Maps- large or small scale maps, land capability maps, climatological maps,
2. Photographic survey- area oblique,
3. Recorded data- from geographical maps, town planners,
4. Restrictions from local government authorities- certificate of occupancy (C of O), set backs on lands, etc.
5. Road types- Trunk A, B or C roads, desire lines, etc.

Site survey- Use

- Triangulation methods- measurements
- Visual survey- visual observations
- Ecological survey- involves all flora and fauna available in the site, use quadrants or a

square for ecological studies and frequency of occurrence.

- Soil Survey- engineering qualities of the site, soil type, soil fertility, soil depth, etc.

Presentation of Information

Present your information using

1. Location plan-
2. Base plan- working plan for information gathering and records puposes.
3. Topography- hilly, sloppy, level lands, etc.
4. Geology and soil types
5. Services- utility lines, above or underground cables and pipes, etc.
6. Access and circulation- roads, water bodies, etc.
7. Micro-climate, vegetation, bare or covered.
8. Ecology- flora and fauna, dominant, co-dominant or recessive species
9. Visual characters, bad views, good views, etc.
10. Written reports

I. Elements of landscaping:

Visual art such as painting, sculpture, architecture etc are derived from line, form, texture and space. The elements when combined could be used in a variety of ways to influence the artist's vision. In landscape design, as with other forms of visual arts, these elements are the foundation of goo design.

1. Line: lines can be horizontal, vertical, diagonal or curved. It is how they are used individually or in combination that gives a landscape dimension. Lines can appear graceful or crude, bold or delicate.

2. Form: Form is associated with three dimensional objects, while shape refers to two dimensional objects. Both are made from lines, but the way these lines are arranged determines the shape or form.

3. Colour: Colour is perhaps the most complex art element, and it tend to be the most used element. Based on the Munsell system, colour has three dimensions; hue,value and chroma.

4. Texture: It is the surface characteristics that is seen or felt. Texture can be categorized in to coarse, medium and fine. All landscape components have their on textures. Contrasting textures add interest to a design, but much textural contrast can result in a chaotic scene.

5. Space: In designing landscape space, it is important to differentiate between positive (occupied or filled space) and negative (unoccupied or empty space). Space can be two or three dimensional as a shape or a form respectively. It is important to effectively use element of space to help organize a landscape and provide focus to specific areas.

J. Principles of landscape design

The goal in developing a landscape plan is to design a plan that will achieve unity and harmony. The principles of landscape design are the building blocks used by designers to create beautiful and functional landscapes. Similar to elements of art, these principles represent the primary concern that influences landscape design. Design principles are not rules that require precise adherence, but instead reflect a framework of universal concepts that prove effective in creating designs.

Therefore the following principles should be considered in designing the plan;

1. Simplicity: Regardless of the scale of a landscape, simplicity should be an overriding design consideration. Simplicity in a landscape can be created both physically and visually.

2. Order: Order can be achieved by using consistent design theme such as formal, informal or structured informality. Grouping plants and hard-scapes so that there are physical connections between the elements will enhance order and create a cohesive whole.

3. Repetition: There is need for reappearance of attractive materials in several locations in the landscape. It results in a sense of unity between the different plant species that make up the design.

4. Rhythm and line: It addresses the factors of time and movement within a landscape. Landscapes are seldom experienced in an instant, but rather through time as a person explores the space. Rhythm in a landscape may be visual or physical, and it can be observed in both vertical or horizontal planes of a design.

5. Unity: It is the principle that creates link between the plants, hardscapes and house. It creates a sense of interconnectedness within the design composition. Unity can be reinforced by using consistent bedlines, single ground cover, massing plants together and repeating these masses throughout the landscape.

6. Balance: The design should include a focal point or centre of interest around which the landscape plants, structures, and open spaces are grouped or balanced. The arrangement of plants and other objects should be in a sequence leading to or away from a focal point. The types of balance in landscapes are symmetrical, asymmetrical and radial.

7. Proportion and scale: refers to size relationship between the different components within the landscape. It could be relative or absolute. Relative scale is the relation of one part of the design to the others. The major relationship that involve plant materials are; plants to buildings, plants to other plants and plants to people. To attain correct proportion, the landscape design should be based on mature height and spread of the plant.

8. Emphasis: focal points draw the eye to specific landscape locations when a person is viewing the landscape as a whole. A focal point may be a specimen plant, garden accessory or water feature.

Basic Styles in landscaping

1. Corner planting- incurves, outcurves,
2. Line planting
3. Foundation planting

K. Selection criteria of material inputs

i.) Selection criteria for plants:

1. Ability to fill the role assigned it in the design
2. Ability to survive the growing conditions of the site
3. Availability and affordability by clients
4. Plant size at maturity
5. Flowering qualities
6. Foliage and tree back colour
7. Presence or absence of thorns
8. Plant rate of growth and length of life
9. Deciduous or evergreen
10. Susceptibility to pests and diseases
11. Frequency of pruning required
12. Soil preference etc

ii.) Selection criteria for paving:

1. Ability to fill the role assigned it in the design

2. Availability and affordability by clients
3. Durability
4. Maintenance requirements

L. Review of soft and hard landscaping.

Soft landscaping: refers to the plant component of landscaping. It entails the use of plants of all categories (palms, trees, shrubs, grasses, herbaceous plants etc) that are natural in a landscape. The plantings of especially indigenous plant species ensure integration of structures in to the natural environment thus appearing natural in nature, among other many uses of plants in our surroundings.

Hard landscaping: The use of any non-plant materials in the development of a landscape. Examples include walkways, driveways, patio, decks, walls, ponds, fences, pergolas, steps, landscape lightings, water fountains, furniture, containers for potted plants etc. These features, individually and in combination, make up the ground, vertical, and overhead planes within a landscape and define outdoor living spaces.