Introduction to Dentistry 1

Introduction
What is DENTISTRY?

The World Health Organization (WHO) defines Dentistry as "the science and art of preventing, diagnosing and treating diseases, injuries and malformations of the teeth, jaws and mouth". Dentistry is an ethical profession and practicing dentists are expected to place the welfare of their patients before any other consideration.
Who is a DENTIST?

A DENTIST is a scientist and clinician dedicated to the highest standards of health through

• prevention,

• diagnosis and

• treatment of oral diseases and conditions.
Who is a DENTIST?

The notion of dentists as those who merely “fill teeth” is out-of-date.

Today, dentists are highly sophisticated health professionals who provide a wide range of care that contributes enormously to the quality of their patients’ day-to-day lives.
Who is a DENTIST?

The dental profession includes also those who teach, conduct research, and work in public and international health.

All of these individuals are vital links in the health care delivery system, necessary to promote social and economic change as well as individual well-being.
What are the recognized dental specialties?

- Endodontists
- Oral and Maxillofacial Surgeons
- Oral Surgeons
- Orthodontists
- Paediatric Dentists
- Periodontists
- Prosthodontists
- Public Health Dentists
- Special Needs Dentists
- & other more.
Why Oral & Dental Anatomy & Morphology?

Knowledge of oral and dental anatomy and morphology is fundamental in the study and practice of all the disciplines of dentistry. It is essential in diagnosis, treatment planning and treatment.
Why Oral & Dental Anatomy & Morphology?

When you have successfully completed the theoretical part of this course, you will know the anatomical and morphological characteristics of the teeth and their supporting structures, inter-arch and intra-arch relationships and eruption.
Why Oral & Dental Anatomy & Morphology?

When you have successfully completed the practical laboratory part of this course, you will be able to draw and carve Teeth that meet anatomical, morphological and functional requirements.
Definitions

**Oral**: related to the mouth

**Dental**: related to the teeth

**Anatomy**: the science of the form, structure, and parts of animal organisms.

**Morphology**: is a branch of life science dealing with the study of gross structure of an organism and its component parts. This includes aspects of the outward appearance (shape, structure, color, pattern).
Definitions

**Dental anatomy & Morphology:**
the branch of dentistry concerning with form and structure of the teeth and neighboring tissues and the relationship of their parts. The study involves macroscopic and microscopic components.
REFERENCES

Concise Dental Anatomy and Morphology
James L. Fuller et al
REFERENCES

Dental Anatomy, Its Relevance to Dentistry, Julian Woelfel et al
REFERENCES

Wheeler, Dental Anatomy, Physiology and Occlusion
Let's begin!

Body planes
Body planes

- Sagittal plane
- Frontal plane
- Horizontal plane
- Median (Mid-sagittal) plane
Sagittal plane

A sagittal plane passes longitudinally through the body parallel to the median plane, dividing the body into left and right portions.
Frontal plane

the frontal plane passes longitudinally through the body from side to side, at right angles to the sagittal plane, dividing the body into front and back parts.
Horizontal plane

The frontal plane passes through the body, at right angles to both the frontal and sagittal planes, dividing the body into upper and lower parts.
Median (Mid-sagittal) plane

The sagittal plane which passes through the middle of the body from front to back, dividing it into right and left halves.
Facial Midline

The imaginary vertical line which divides the face into approximately equal left and right halves.
the dentition

Human has two jaws:
- the upper jaw, the Maxilla and
- the lower jaw, the Mandible.
The dentition

The teeth are arranged in arches:

- The upper (maxillary) arch
- The lower (mandibular) arch
The dentition

The midline divides the arches into right and left quadrants.

• The right maxillary quadrant
• The left maxillary quadrant
• The right mandibular quadrant
• The left mandibular quadrant
Occlusion

The manner in which mandibular teeth contact the maxillary teeth is called **OCCLUSION**.

The process of biting or chewing is called **MASTICATION**.
Classification of Dentitions

Human has 4 types, termed classes, of teeth.

- Incisors
- Canines (cuspids)
- Premolars (bicuspids)
- Molars

So the human dentition is termed **HETERODONT**.
Classification of Dentitions

In comparison, a homodont dentition is one in which all teeth are the same in form and type.

A skull of a crocodile
Classification of Dentitions

- Monophyodont: has one set of teeth.
- Diphyodont: has two sets of teeth.
- Polyphyodont: has many sets of teeth.
Classification of Dentition

We have two dentitions (diphyodont):

1. Deciduous (or primary) dentition
2. Permanent dentition

The transitional phase is called mixed dentition.

There are teeth from both dentitions are present in the oral cavity.
Permanent teeth

Primary teeth
Classification of the Teeth

In the permanent dentition each quadrant contains eight teeth of differing classes:

1. Two Incisors: central and lateral Incisor
2. One Canine
3. Two Premolars: first and second Premolar
4. Three Molars: first, second and third Molar
Classes of Permanent Teeth

- Eight teeth in each quadrant
- 16 teeth in each jaw
- A complete permanent dentition consists of 32 teeth.
Classification of the Teeth

In the primary dentition each quadrant contains five teeth of differing classes:

1. Two Incisors: central and lateral incisor
2. One Canine
3. Two Molars: first and second Molar
Classes of Primary Teeth

- Five teeth in each quadrant
- 10 teeth in each jaw
- A complete primary dentition consists of 20 teeth.