UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

# SYLLABUS DEL CORSO

# Anatomia Umana Normale ed Apparato Stomatognatico I

**2627-1-H4602D001-H4602D00101**

## Aims

Detailed knowledge of the normal anatomy of all the organs and structures that constitute the systems of the human body.

## Contents

The course aims to provide students with theoretical knowledge to learn the macroscopic and microscopic organization of the organs and structures of the human body, their embryonic development and the pathological changes occurring in diseases.
The central nervous system (SNC) will be covered in the module “Human Anatomy and the Stomatognathic System II.”

## Detailed program

GENERAL ANATOMY
Anatomic terms; planes, lines and anatomical landmarks; terms related to movement; principles of organization of the human body: cells, tissues, organs, systems; serous cavities and connective spaces, their location and content.

MUSCULOSKELETAL SYSTEM
Classification of the bones, muscles and joints.
Cranium and facial bones: general architecture of the skull and main characteristics of the individual bones; base of the skull: cranial fossae and major foramina with the structures that each transmits; cranial sutures; neonatal skull; nasal cavity, orbital cavity, paranasal sinuses.
The vertebral column: general characteristics of the vertebrae and regional differences; atypical cervical vertebrae:

atlas and axis; joints of the vertebral column; general features of the muscles of the back. Neck: main characteristics of the muscles of the neck.
Chest: bones and cartilages of the thoracic cage; joints of the ribs and costal cartilages; muscles of the thorax, respiratory muscles, in particular diaphragm muscle.
Shoulder girdle and upper limb: main characteristics of the different bones; shoulder and elbow joints, main features of the other joints; muscles of the shoulder, the rotator cuff, arm muscles, general features of forearm and hand muscles.
Pelvis and lower limb: study of the hip bones in detail, main characteristics of the other bones; joints and ligaments of the pelvis, hip joint, knee joint, main features of the other joints; hip and thigh muscles, muscles of the leg, general features of foot muscles; Scarpa's triangle and adductor canal.
Abdominal wall: anterolateral and posterior abdominal wall muscles; inguinal ligament; inguinal canal.
Pelvic floor:pelvic diaphragm; perineum.
CARDIOVASCULAR SYSTEM
Heart: surface, structure, chambers of the heart, conducting system; heart vessels; pericardium; mediastinum: definition, borders and contents. Blood vessels: vessels structure (arteries, veins and capillaries); pulmonary and systemic vascularization, with major focus on: aorta and its branches; Polygon of Willis; blood supply of the upper and lower limbs; blood supply of the organs; superior and inferior vena cava venous system; portal vein system; anastomosis.
LYMPHATIC SYSTEM
General organization of the lymphatic drainage. Thoracic duct. Position, relations, macroscopic and microscopic anatomy of the lymphoid organs: thymus, spleen, lymph nodes and tonsils; main lymph node chains.
RESPIRATORY SYSTEM
Nose, nasal and paranasal cavities. Position, relations, macroscopic and microscopic anatomy of the organs of the respiratory tract: pharynx, larynx, trachea, bronchi, lungs. Blood supply of the organs. Visceral and parietal pleura.
DIGESTIVE SYSTEM
Oral cavity. Salivary glands. Position, relations, macroscopic and microscopic anatomy of the organs of the gastrointestinal tract: esophagus, stomach, small intestine (duodenum, jejunum, ileum), large intestine (cecum, appendix, colon and rectum). Other organs of the digestive system: liver, bile ducts, gallbladder, pancreas; their position, relations, macroscopic and microscopic anatomy, with focus on the different types of hepatic lobules. Blood supply of the organs. Peritoneum: general arrangement, ligaments, omenta, mesenteries, intraperitoneal and retroperitoneal relationships of the different organs.
URINARY SYSTEM
Position, relations, macroscopic and microscopic anatomy of the organs of the urinary tract: kidneys, with focus on the structure of the nephron, bladder, ureter, male and female urethra. Blood supply of the organs.
ENDOCRINE SYSTEM
General characteristics of hormones. Position, relations, macroscopic and microscopic anatomy of the endocrine organs: pituitary gland and its connection with the hypothalamus, thyroid, parathyroid, adrenal gland, endocrine pancreas, pineal gland. Blood supply of the organs. General characteristics of GEP system.
FEMALE REPRODUCTIVE SYSTEM
Position, relations, macroscopic and microscopic anatomy of the female genital organs: ovary, uterus, fallopian tube, vagina. Blood supply of the organs. External genitalia: morphology, relations and structure. Main characteristics of placenta.
MALE REPRODUCTIVE SYSTEM
Position, relations, macroscopic and microscopic anatomy of the male genital organs: testis, epididymis, vas deferens, prostate, seminal vesicles and bulbourethral glands. Structures of the spermatic cord. Blood supply of the organs. External genitalia: morphology, relations and structure.
INTEGUMENTARY SYSTEM
Skin and its appendages. Mammary gland: position, relations, macroscopic and microscopic anatomy. Blood supply of the skin and mammary gland.

SPECIAL SENSES
Eye: the orbit and its contents, basic concepts on the structure of the eye-ball and its muscles. Lacrimal apparatus.
Ear: general structure and components of the outer, middle, inner ear.

CENTRAL NERVOUS SYSTEM

The central nervous system (SNC) will be covered in the module “Human Anatomy and the Stomatognathic System II.”

REGIONAL ANATOMY
Particular reference to topographical aspects and description of the body wall.
THE SKULL
Cranium and facial bones: general architecture of the skull and main characteristics of the individual bones; base of the skull: cranial fossae and major foramina with the structures that each transmits; cranial sutures; neonatal skull; nasal cavity, orbital cavity, paranasal sinuses; temporo-mandibular joint; general features of mimic and masticatory muscles.
NECK
Surface anatomy. Neck triangles. Deep cervical fascia. Neck muscles, vessels and nerves.
ABDOMEN
Surface anatomy. Abdominal wall: muscle-fascial components, vessels and nerves. Inguinal canal. Organization of the peritoneum and its relationship with the organs contained in the abdominal cavity
PELVIS
Surface anatomy. Pelvic inlet and outlet. Pelvic wall, in particular pelvic floor muscles (pelvic diaphragm and perineum), vessels and nerves.

LABORATORIES
To deepen and to reinforce the lectures’ topics, gross anatomy laboratories will be provided. During this interactive teaching, students will use anatomy models, as well as they will be guided in the solution of quizzes and easy clinical cases, in small groups and under the supervision of the teacher.

In particular, by using anatomy models, students will recognize the main features of:

- Skull and skeleton
- Upper and Lower limbs
- Heart
- Thorax and Abdomen
- Male and Female Pelvis
- Eye and Ear

## Prerequisites

College level scientific knowledge

## Teaching form

20 Lectures (2h/each) and practical experiences (24h) on anatomical models. Exam simulations will also be performed with multiple choice questions and/or open questions.
Virtual dissection by using the 3D Anatomage Table.

## Textbook and teaching resource

For Textbooks and teaching resources see "Anatomia, Istologia ed Embriologia Generali e dell'Apparato

Stomatognatico" general syllabus.

## Semester

2nd term of the 1st year

## Assessment method

An extensive assessment is scheduled for the end of the second semester
For the details see "Anatomia, Istologia ed Embriologia Generali e dell'Apparato Stomatognatico" Syllabus.

## Office hours

Mon-Fri by appointment
email: guido.cavaletti@unimib.it - paola.marmiroli@unimib.it - arianna.scuteri@unimib.it - valentina.carozzi1@unimib.it - cristina.meregalli@unimib.it

## Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION | GENDER EQUALITY