UCL SUMMER SCHOOL

ANATOMY AND DEVELOPMENTAL BIOLOGY

Key Information

Module code ISSU0019
Taught during Session Two: Monday 22 July - Friday 9 August 2019
Module workload 45 teaching hours plus approximately 100 study hours
Module leader Dr Leslie Dale
Department Biosciences, Faculty of Life Sciences
Credit 15 UCL credits, 7.5 ECTS, 4 US
Level Level 1, first year Undergraduate
Pre-requisites Standard UCL Summer School entry criteria with a knowledge of basic biology
Assessment Computer based examination (70%)
Practical assessments (30%)

Module Overview

Week One
• Cells and Tissues
• Fertilization and Formation of the Body Plan
• Anatomy and Development of the Nervous System
• Anatomy and Development of the Digestive System

Week Two
• Anatomy and Development of the Respiratory System
• Anatomy and Development of the Cardiovascular System
• Musculoskeletal System
• Sex Determination and Urogenital System

Week Three
• Anatomy and Evolution of Limbs
• Development of Limbs
• Anatomy and Development of the Head

Module Aims
This module provides an introduction to significant aspects of human anatomy and embryonic development. It aims to prepare students for more advanced studies in these subjects. The module will cover topographical anatomy and embryonic development of the nervous system, cardiovascular system, respiratory system, digestive system, musculoskeletal system, urogenital system, and limbs. It will also cover the first few weeks of human development and provide an understanding of the key principles of embryonic development. The

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module will also cover the cellular organisation of tissues and organs. The module will be taught by lectures, a series of seminars covering more specialised topics, a small number of practicals, and a class in the Anatomy Laboratory (Dissecting Room).

Teaching Methods
Interactive lectures and seminars, open class and small group discussions, group work and private study. Reading lists will be available online via the UCL library site. Students will be directed towards class materials, further support and discussion forums on Moodle.

Learning Outcomes
Upon successful completion of this module, students will:

- Be familiar with human anatomy and be able to describe and compare the principal structures of major human organs and systems.
- Be familiar with the anatomical basis of the function of major organ systems, such as the circulation, digestive tract, reproductive tract and nervous system.
- Be familiar with the cellular organisation of the major tissues and organs of human anatomy.
- Be familiar with the basic principles of embryonic development and the formation of the body plan during the first four weeks of human development.
- Be familiar with the embryonic development of the major organ systems, such as the nervous system, heart, lungs, digestive tract, reproductive tract, limbs, and head.

Assessment Methods

- 60-minute computer based examination (70%)
- Practical assessments (30%)

Key Texts

**Anatomy**
Tortora, Derrickson. Principles of Anatomy and Physiology
Martini, FH. Fundamentals of Anatomy and Physiology
Abrahams P, Craven J, Lumley. Illustrated Clinical Anatomy

**Histology**
Wheater’s Functional Histology

**Developmental Biology**
Larsen’s Human Embryology
*also useful*
Gilbert, S. Developmental Biology
Wolpert, L. Principles of Development

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