

Human Anatomy and General Physiology (J000377)

Course size (nominal values; actual values may depend on programme)

Credits	7.0	Study time	210 h	Contact hrs	45.0 h
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Course offerings and teaching methods in academic year 2018-2019

A (semester 2)	Dutch	lecture	37.5 h
		guided self-study	7.5 h

Lecturers in academic year 2018-2019

Van de Voorde, Johan	GE33	lecturer-in-charge
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Offered in the following programmes in 2018-2019

Bachelor of Science in Pharmaceutical Sciences	crdts	offering
	7	A

Teaching languages

Dutch

Keywords

Physiology, anatomy, organs, body systems, disturbances in physiologic mechanisms, targets of drugs.

Position of the course

This course highlights the functional structures (anatomy) and the mechanisms involved in the functioning (physiology) of the human body, with special emphasis on potential targets for drugs. This course is a follow-up of the course animal cell biology and histology and is necessary to understand courses taught in higher years such as physiology and pathophysiology of body systems, pathology, pharmacology and pharmaceutical care/rational drug therapy.

Contents

In a first chapter, basic topographic aspects and some elementary basic physiological topics (distribution of fluids, transport mechanisms, cell membrane potential, communication systems) are covered. Further chapters deal with structure and function of some more specific body systems such as the nervous system, skin, musculo-skeletal system, endocrine systems and reproductive systems. As much as possible links are made to targets of drugs acting on these systems. The chapters are supplemented with some pathophysiological concepts of common diseases and with some aspects of pharmaceutical care/rational drug therapy.

Initial competences

Final competences of secondary school or competences corresponding herewith

Final competences

- 1 to integrate knowledge about distribution of fluid in the organism, intercellular communication, features of cell membrane with special emphasis on the electrophysiological aspects such as action potential and ion channels.
- 2 to understand general and cellular (normal and pathologic) homeostatic mechanisms.
- 3 to use of most common terminology in anatomy.
- 4 to associate the structure with the functional organisation of the nervous system and understand neurodegeneration and its consequences.
- 5 to understand the interaction between drugs and neurotransmission and the potential influence of this interaction on the human body.

- 6 to understand integrated nerve functions (pain, thermoregulation, arousal and sleep, memory, food intake) and their pharmaceutical approach.
- 7 to understand structural and functional aspect of the skeleton, skeletal muscle activity and skin and their pharmaceutical approach.
- 8 to integrate the endocrine systems in the general functioning of the human body.
- 9 to associate the mechanisms of the reproductive systems with their potential disturbances and potential interventions.
- 10 to assimilate information as required for life-long learning.
- 11 to understand common medical terminology.

Conditions for credit contract

Access to this course unit via a credit contract is determined after successful competences assessment

Conditions for exam contract

Access to this course unit via an exam contract is unrestricted

Teaching methods

Guided self-study, lecture

Extra information on the teaching methods

Lectures (with illustrations using computer and computer simulations) (37.5 h)+ 1 chapter self-study (cf. reference book) based on a list of questions about the chapter (7.5 h).

Learning materials and price

A syllabus (in Dutch) is available. Price about 8 €. Presentations used in the lectures are available on the electronic learning platform.

References

"Principles of Anatomy and Physiology" (Tortora and Derrickson), 13th edition.

Course content-related study coaching

Students have different possibilities to ask questions, both individually and in group: before or after the classes or on appointment. Small numbers of questions can also be answered by E-mail. For larger numbers the student should make an appointment. Response meeting for the self-study part of the course if necessary.

Evaluation methods

end-of-term evaluation

Examination methods in case of periodic evaluation during the first examination period

Written examination with multiple choice questions

Examination methods in case of periodic evaluation during the second examination period

Written examination with multiple choice questions

Examination methods in case of permanent evaluation

Possibilities of retake in case of permanent evaluation

not applicable

Extra information on the examination methods

Written examination using multiple choice questions.

Calculation of the examination mark

100 % based on written examination. Calculation of the final score of the multiple choice questions is based on the standard setting.