GHENT UNIVERSITY

Course Specifications

Valid as from the academic year 2020-2021

From Genome to Organism (E092662)

Due to Covid 19, the education and evaluation methods may vary from the information displayed in the schedules and course details. Any changes will be communicated on Ufora.

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

Credits	Study time	Contact hrs
3.0	90 h	30.0 h

Course offerings and teaching methods in academic year 2020-2021

A (semester 1)	English	Gent	seminar	5.0 h
			lecture	25.0 h

Lecturers in academic year 2020-2021

Malfait, Fransiska	GE31	lecturer-in-charge
Peeters, Harald	GE35	co-lecturer
Wullaert, Andy	GE35	co-lecturer

Offered in the following programmes in 2020-2021	crdts	offering
Bachelor of Science in Engineering (main subject Biomedical Engineering)	3	A
Master of Science in Electrical Engineering (main subject Communication and Information Technology)	3	A
Master of Science in Electromechanical Engineering (main subject Control Engineering and Automation)	3	A
Master of Science in Electromechanical Engineering (main subject Electrical Power Engineering)	3	A
Master of Science in Electrical Engineering (main subject Electronic Circuits and Systems)	3	A
Master of Science in Electromechanical Engineering (main subject Maritime Engineering)	3	A
Master of Science in Electromechanical Engineering (main subject Mechanical Construction)	3	A
Master of Science in Electromechanical Engineering (main subject Mechanical Energy Engineering)	3	A
Master of Science in Chemical Engineering	3	A
Master of Science in Computer Science Engineering	3	A
Master of Science in Computer Science Engineering	3	A
European Master of Science in Photonics	3	A
Master of Science in Sustainable Materials Engineering	3	A
Master of Science in Chemical Engineering	3	A
Preparatory Course Master of Science in Biomedical Engineering	3	A

Teaching languages

English

Keywords

Life sciences, biology, basics of human anatomy

Position of the course

Aim of the course is introduce students into the anatomy and physiology of the human body, by giving insight into the molecules of life, principles of cellular organisation, gene structure and gene expression, fertilization and embryogensis and in the structure and functioning of the human body.

Contents

- The Molecules of Life: Nucleic Acids, Proteins, Lipids, Carbohydrates
- Principles of Cellular Organisation: Structure of the Cell, The Generation of Cellular

Energy, Cell Division
- DNA structure, the Genetic Code; replication of DNA, Gene Expression and Protein Synthesis
- Fertilization and embryogenesis
- Basic principles of the anatomy and physiology of different tissues and organs of the human body, including skin, bone, muscle, the nervous, digestive, cardiovascular, respiratory and immune system.

Initial competences

No specific initial competences required

Final competences

1 Basic knowledge of the structure and physiology of the cell; molecular biology; protein structure.
2 Basic knowledge of the structure of DNA; de genetic code; DNA replication; gene expression; and protein synthesis.
3 Basic knowledge of fertilization and embryogenesis of the human body.
4 Basic knowledge of the anatomy and physiology of the skin, bone, muscle, immune system, nervous system, cardiovascular, respiratory and digestive system of the human body.

Conditions for credit contract

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

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Lecture, seminar

Learning materials and price

Syllabus, hands out

References

Human Anatomy and Physiology, 10th edition. Elaine N. Marieb and Katja Hoehn, Pearson International edition.
Student price: approximately 62 EUR.

Course content-related study coaching

Evaluation methods

end-of-term evaluation

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

Written examination

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

Written examination

Examination methods in case of permanent evaluation

Possibilities of retake in case of permanent evaluation

not applicable

Extra information on the examination methods

During examination period: written closed-book exam with multiple choice questions

Calculation of the examination mark

The exam consists of 5 open question and 30 multiple choice questions with 5 possible answers. Only one answer is correct.