UNIVERSITY OF SKÖVDE

COURSE SYLLABUS

Human Genetics A1N

7 credits

Course code: BM707A
Version number: 1
Valid from: 1 January 2025
Ratified by: Curriculum Committee for Health Sciences
Date of ratification: 24 April 2024

1. General information about the course

The course is provided by the University of Skövde and is named Human Genetics A1N (Humangenetik A1N). It comprises 7 credits and is a second-cycle course. The level of progression is A1N.

The course is a part of the main field of study in Biomedicine. The disciplinary domain of the course is Natural Sciences.

2. Entry requirements

A Bachelor's degree equivalent to a Swedish kandidatexamen of 180 credits, with a major within the main field of Biomedicine, Biotechnology, Cell and Molecular Biology or Medicine (or the equivalent).

An additional requirement is proof of skills in English equivalent of studies at upper secondary level in Sweden, known as the Swedish course English 6. This is normally demonstrated by means of an internationally recognized language test, e.g. IELTS or TOEFL.

3. Course content

The course entails in-depth studies of human hereditary conditions, how genetic diseases can arise and be detected as well as in-depth studies of the structure and function of the human genome. Computer exercises focusing on the inheritance of genetic diseases are conducted during the course, and ethical aspects related to genetic studies in humans are addressed.

4. Objectives

After completion of the course, the student shall be able to:

- provide detailed explanations of genes in pedigrees and populations, genetic mapping of Mendelian inherited traits, and organization of the human genome.
- explain the emergence of genetic diseases and how genetic testing can be conducted for disease detection
- elaborate on principles of gene expression
- conduct human genetic data exercises, analyze and present the results
- explain, discuss and evaluate ethical aspects of genetic studies in humans

5. Examination

The course is graded A (Excellent), B (Very good), C (Good), D (Satisfactory), E (Sufficient) or F (Fail).

The examinations of the course consist of the following modes of assessment:

- **Superwised written examination**
  4.5 credits, grades: A/B/C/D/E/F (determines the final grade)
- **Computer exercises**
  1.5 credits, grades: G/U
- **Seminar assignment**
  1 credit, grades: G/U

Students with a permanent disability who have been approved for directed educational support may be offered adapted modes of assessment.

6. Types of instruction and language of instruction

The teaching is comprised of lectures, group assignments, seminars and exercises.

The teaching is conducted in English.

7. Course literature and other educational materials

Strachan, T. & Read, A. P. (2018). *Human molecular genetics* (5th ed.). London: Garland Science. ISBN 9780815345893.

Scientific articles and web material will be added.

The latest edition of the course literature shall be used.

8. Student influence

Student influence in the course is ensured by means of course evaluation. The students are informed about the results of the evaluation and potential measures that have been taken or are planned, based on the course evaluation.

9. Additional information

Further information about the course, as well as national and local governing documents for higher education, is available on the website of the University of Skövde.