



COURSE SYLLABUS

Introduction to Medical Sciences - Bridging Course, 15 credits

Introduction to Medical Sciences - Bridging Course, 15 högskolepoäng

Course Code:	HIMR20	Education Cycle:	Second-cycle level
Confirmed by:	Utbildningsrådet May 14, 2020	Disciplinary domain:	Medicine
Revised by:	Department head Jun 17, 2024	Subject group:	MT2
Valid From:	Autumn 2024	Specialised in:	A1N
Version:	3		

Intended Learning Outcomes (ILO)

Upon completion of the course the student should have the ability to:

Knowledge and understanding

- describe human surface anatomy
- describe the human musculoskeletal system
- describe and explain basic human pathophysiology in relation to assistive technology
- describe the fundamental movements of joints and the muscles that create movement
- describe basic biomechanical principles in relation to mobility and assistive technology
- describe common impairments related to the musculoskeletal system
- demonstrate an understanding of the cultural, medical and psychological aspects of living with an impairment
- describe common neurological impairments
- explain the consequences of different assistive technology interventions on body functions and structures.

Skills and abilities

- apply common classification systems for health and wellbeing, health interventions and diagnosis.

Judgement and approach

- appreciate the ethical implications of working with individuals with a functional variation.

Contents

- medical terminology
- a biopsychosocial perspective of disability
- musculoskeletal, nervous, circulatory, integumentary system
- orthopaedic impairments
- neurological impairments
- biomechanics of normal and pathological movement
- patients' professional interaction and ethics

- common disease processes that lead to functional impairment
- the human life cycle
- classifications of health and health interventions and diagnosis
- consequences of assistive technology provision on health and wellbeing

Course unit 1, 0,0 credits

Type of instruction

The course is implemented through lectures, group work and field studies.

The teaching is conducted in English.

Prerequisites

The applicant must hold the minimum of a Bachelor's degree or equivalent (i.e. the equivalent of 180 ECTS credits at an accredited university) in mechanical engineering. Proof of English proficiency is required.

Examination and grades

The course is graded A, B, C, D, E, FX or F.

Examination of the course will be based upon two individual written exams and seminars. A senior lecturer serves as examiner for the course.

In individual written examination Fx will not be applied.

Registration of examination:

Name of the Test	Value	Grading
Individual written exam I	4.5 credits	A/B/C/D/E/FX/F
Individual written exam II	4.5 credits	A/B/C/D/E/FX/F
Seminars	6 credits	U/G

Course literature

Tortora, G. J., & Derrickson, B. (2019). *Introduction to the Human Body*. (11th edition, EMEA edition ed.). Wiley

or

VanPutte, C. L., Seeley, R. R., Regan, J.L., & Russo, A. F. (2021). *Seeley's Essentials of Anatomy and Physiology* (Eleventh edition, International student edition ed.). McGraw-Hill.

Together with one of the atlases of anatomy below:

Dauber, W., & Feneis, H. (2007). *Pocket Atlas of Human anatomy: Founded by Heinz Feneis* (5., rev. ed.). Thieme

or

Lippert, L. (2023). *Clinical kinesiology and anatomy* (Seventh edition). F.A. Davis.

The latest edition of the course literature shall be used.