



## COURSE SYLLABUS

# Introduction to Medical Sciences - Bridging Course, 15 credits

*Introduction to Medical Sciences - Bridging Course, 15 högskolepoäng*

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<b>Course Code:</b>	HIMR20	<b>Education Cycle:</b>	Second-cycle level
<b>Confirmed by:</b>	Utbildningsrådet May 14, 2020	<b>Disciplinary domain:</b>	Medicine
<b>Revised by:</b>	Utbildningsrådet Mar 12, 2024	<b>Subject group:</b>	MT2
<b>Valid From:</b>	Autumn 2024	<b>Specialised in:</b>	A1N
<b>Version:</b>	2		

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## 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

### 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

Netter, F.H. (2014). *Atlas of Human Anatomy* (sixth Edition ed.). Saunders/Elsevier.

The latest edition of the course literature shall be used.