COURSE SYLLABUS

Prosthetic and Orthotic Management of the Upper Limb, 7.5 credits

Prosthetic and Orthotic Management of the Upper Limb, 7,5 högskolepoäng

Course Code:	HPLK19	**Education Cycle:**	First-cycle level
Confirmed by:	Utbildningsrådet May 9, 2018	**Disciplinary domain:**	Technology
Valid From:	Nov 4, 2019	**Subject group:**	MT2
Version:	1	**Specialised in:**	G1F
Reg number:	Department of Rehabilitation	**Main field of study:**	Prosthetics and Orthotics

Intended Learning Outcomes (ILO)

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

Knowledge and understanding

- compare and contrast best available evidence related to orthotic and prosthetic management of upper extremity impairments
- explain relevant treatment strategies and interventions for upper limb orthotic management
- explain relevant treatment strategies and interventions for upper limb prosthetic management
- describe common materials and manufacturing methods used in the production of upper extremity prostheses and orthoses
- describe rehabilitation and orthotic interventions commonly used to manage burns/trauma of the hand
- explain principles used in the management of fractures
- describe biomechanical principles relevant to the subject area.

Skills and abilities

- perform an independent assessment to determine the desired function of a prosthetic or orthotic device and communicate this with the client
- discuss interventions and outcomes in accordance with relevant laws, regulations and quality registries
- critically evaluate the relevance of current science and proven experience within the subject area
- show familiarity with frequently used materials and equipment necessary in the production of devices for the upper limb
- manufacture orthoses and prostheses for the upper limb in accordance with occupational health and safety guidelines
- use appropriate outcome measures to evaluate interventions.

Judgement and approach

- be aware of and respect the role and responsibilities of prosthetist/orthotists and other professionals
- understand when clients are in need of multidisciplinary care and recognize when other health professionals are needed
- evaluate and reflect on an intervention considering biomechanical, ethical, personal, social and societal factors
- continually evaluate and improve one's own contribution/performance.

Contents

- prostheses for the upper limb
- orthoses for the upper limb
- management of burns
- soft tissue biomechanics related to stretching
- current research and evidence within the subject area
- terminology for the upper limb orthoses and prostheses

Type of instruction

The course is conducted through lectures, case seminars and laboratory sessions including patient meetings.

The teaching is conducted in English.

Prerequisites

General entry requirements and completion of the courses Anatomy and physiology, basic course, 7.5 credits, Pathophysiology related to prosthetics and orthotics, 7,5 credits, Orthotic management and biomechanics I, 15 credits (or the equivalent).

Examination and grades

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

The examination will be based upon one individual written examination and one practical examination.

A university lecturer serves as examiner for the course.

Registration of examination:

Name of the Test	Value	Grading
Individual written examination	6.5 credits	A/B/C/D/E/FX/F
Practical examination	1 credit	U/G

Other information

Attendance requirements

During the course attendance is compulsory during laboratory sessions and seminars.

Temporary interruption of a course

The School of Health and Welfare may suspend a student's participation in clinical training or

other practical activities during the course if a student demonstrates gross unfitness/incompetence when applying skills. A student whose work-based training or other practical activities have been canceled due to gross inadequacy/incompetence may not continue study before the course director or examiner has verified and approved that the student has the knowledge and skills required. In connection with a decision on suspension, the decision will specify the grounds on which the suspension is based. After the decision, an individual plan will be established for the student where knowledge and skills gaps are specified, the degree of support the student is entitled to, and the terms and date(s) for examination(s).

Course literature

Lusardi, M., Jorge, M., & Nielsen, C. (2013). *Orthotics and Prosthetics in Rehabilitation*. St.Louis: Saunders Elsevier.

Van Lede, P. & van Veldhoven, G. (1998). *Therapeutic hand splints: a rational approach. Volume 1, Mechanical and biomechanical considerations.* Wilrijk: Provan.

Van Lede, P. & van Veldhoven, G. (2002). *Therapeutic hand splints: a rational approach. Volume II, Practical applications*. Wilrijk: Provan.

Reference litterature

Krajbich JI., Pinzur MS., LTC Potter BK., & Stevens PM. (Eds.). (2016). *Atlas of Amputations and Limb Deficiencies: Surgical, Prosthetic and Rehabilitation Principles*. Rosemont, Illinois: American Academy of Orthopaedic Surgeons.

The most recent editions of the course literature should be used.
Additional relevant journal articles will be used.