



COURSE SYLLABUS

Quality improvement in Health and Engineering, 7.5 credits

Quality improvement in Health and Engineering, 7,5 högskolepoäng

Course Code: HQHS21	Education Cycle: Second-cycle level
Confirmed by: Utbildningsrådet Apr 13, 2021	Disciplinary domain: Medicine (60%) and technology (40%)
Valid From: Aug 30, 2021	Subject group: MT2
Version: 1	Specialised in: A1F
Reg number: Department of Rehabilitation	Main field of study: Prosthetics and Orthotics

Intended Learning Outcomes (ILO)

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

Knowledge and understanding

- demonstrate knowledge of concepts, models and methods for continuous quality improvement within health and welfare practice
- demonstrate knowledge of quality improvement in industrial settings, including general concepts, methods and models and current research
- demonstrate knowledge of laws and regulations related to the assistive technology industry with a focus on monitoring quality in and implementing quality systems.

Skills and abilities

- apply concepts, models and methods for continuous quality improvement in practice
- select and use appropriate tools and techniques for controlling, improving and measuring quality
- critically, systematically and independently utilize concepts, methods and tools for risk analysis and evaluation.

Judgement and approach

- consider the importance of professional working relationships in quality improvement
- relate quality improvement knowledge and quality improvement initiatives to core values and sustainable development in health and engineering sectors
- reflect over one's own experience of continuous quality improvement and needs for further knowledge.

Contents

- models of quality improvement
- historical development of quality improvement
- the association between professional knowledge and improvement knowledge
- leadership for quality improvement
- application of improvement knowledge in a personal quality improvement project
- benefits of reflection and learning

- clinical micro-systems
- risk management

Type of instruction

The course is implemented through lectures, case studies, written assignments and group tutorials.

The teaching is conducted in English.

Prerequisites

The applicant must hold a minimum of a Bachelor degree or equivalent (i.e. the equivalent of 180 credits at an accredited university) in prosthetics and orthotics or mechanical engineering. Proof of English proficiency is required. Also the applicant must successfully have completed the courses Fundamentals in Assistive Technology, 7.5 credits and Co-production in Health and Welfare, 7.5 credits.

Examination and grades

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

Examination of the course will be based upon one individual written examination, individual assignment as poster presentation and one seminar.

A senior lecturer serves as examiner for the course.

Registration of examination:

Name of the Test	Value	Grading
Individual written examination	4.5 credits	A/B/C/D/E/FX/F
Individual assignment	1.5 credits	U/G
Group seminar	1.5 credits	U/G

Course literature

Busse, R., Klazinga, N., Panteli, D., Quentin, W., & World Health Organization. (2019). *Improving healthcare quality in Europe: Characteristics, effectiveness and implementation of different strategies*. World Health Organization. Regional Office for Europe.

Nelson E. C., Batalden, P. B., & Godfrey, M. M. (2007). *Quality by Design: A Clinical Microsystems Approach*. Jossey-Bass/Wiley.

Oishi, M. M. K., Mitchell, I. M., & Van der Loos, H. M. (Eds.). (2010). *Design and use of assistive technology: social, technical, ethical, and economic challenges*. Springer Science & Business Media.