Course Package

Health – Q1

Name module	Health – Q1
Educational programme	MSc Health Sciences
Period	First quartile of the first semester – Q1
Study load	15 ECTS
Coordinator	A.H Prins

Health			
Quartile 1	**Quartile 2**	**Quartile 3**	**Quartile 4**
Health Economic Modeling 202300150 (5 EC)			
Stakeholder preference elicitation and decision support (SPECS) **202300145** (5 EC)			
eHealth Development: a Holistic Approach 201600027 (5 EC)			

<u>Required preliminary knowledge</u>: Basic knowledge in Economics; Basic knowledge of Excel and Statistics; Knowledge of organization of healthcare; Students are a little bit familiair with R (Rstudio), or willing to look at some youtube video's and get acquainted with the R programming and topics before the first quartile (all on youtube).

202300150 - **Health Economic Modeling**

Students will learn the basic concepts of systematic reviews and meta analysis. They will learn and present about different types of health economic models, and how these can be used for decision making in healthcare. Particular attention is paid to cohort and to patient-level models, and their differences when it comes to reflecting heterogeneity in real-world clinical practice.
Grading is based on 1) an individual, central examination to tests knowledge on aspects of health economic modeling and skills in working/modeling with R, and 2) a practical assignment in which students develop and populate a Markov cohort simulation model, and interpret the corresponding results, in pairs.

202300145 - **Stakeholder preference elicitation and decision support (SPECS)**

Making decisions in healthcare is a complex task that involves balancing various objectives, such as improving quality of life and survival of patients, while containing costs. Multiple stakeholders perspectives, including that of patients, clinicians, policy makers and the public, must be considered when making these decisions.

Healthcare decisions are made at different levels:

a. In a doctor's office, decisions are aimed at benefiting the patient, preferably with their active involvement to make sure that decisions align with their preferences, wants and needs.

b. Hospitals and healthcare organizations make decisions to ensure high-quality, efficient, and financially sustainable healthcare.

The modules are tentative and subject to change. Please check the website *regularly.*

c. At a societal level, the introduction of new medical devices and pharmaceuticals requires assessment of their benefits, risks, and the need for reimbursement, all within the constraints of a limited healthcare budget.

To enhance the quality of decision-making, structured and explicit approaches are recommended. Multiple Criteria Decision Analysis (MCDA) methods provide a framework for structuring decision processes, offering transparency and validity to decision makers and external stakeholders. Health preference methods (HPM) are methods to qualitative and/or quantitatively elicit preferences and values from different stakeholders, so they can be explicitly incorporated in the decision process. Both these methods are increasingly used in healthcare to support decision-making at the patient, organizational, and societal levels. They allow for the incorporation of information from health technology assessment (HTA) and other sources of evidence or knowledge.

The course "Stakeholder Preference Elicitation and Decision Support" introduces students to a range of techniques for eliciting stakeholder preferences and integrating them into decision-making using MCDA. Students will develop the skills needed to elicit preferences from stakeholders, analyse and visualize the data, and interpret and report the findings.

Key topics covered in the course include:

d. The use of MCDA and HPM in portfolio management, benefit-risk assessment (BRA), health technology assessment (HTA), and shared decision making (SDM).

e. Understanding the potential of MCDA and HPM for both individual preference elicitation and group decision support.

f. Applying MCDA and HPR in the evaluation of a technology from a stakeholder perspective and within the decision context of the students own choosing.

By gaining proficiency in HPM and MCDA, students will be equipped to contribute to more informed and effective healthcare decision-making processes.

201600027 - **eHealth Development: a Holistic Approach**

The main objective of healthcare is to provide the best possible care that meets the needs of patients. However, due to declines in birth rates and longer life expectancies, the number and proportion of elderly people in our developed society is growing. At the same time, fewer working-age adults are available to support and care for the increasing number of (chronically) ill people. Consequently, preserving high standards of patient-centered care is a challenge, which may require an increased focus on important matters such as self-management. Besides these problems, there is a need to further improve the healthcare system and provide personalized treatment that optimally fits the characteristics, needs and daily lives of an increasingly digitalized population. eHealth technologies are seen as a solution to the above-mentioned changes in healthcare. eHealth refers to the use of technology to support health, well-being and healthcare. It is a term that captures interrelated concepts about the health context, technology, and people.

In this master course we will provide you with insights into the domain of eHealth. You will be introduced to concepts of user-friendly, value driven and persuasive eHealth technologies and their holistic development, implementation and evaluation processes.

If you are enrolled in the Personalized Monitoring & Coaching track, the acquired knowledge will also be useful for the other two master courses. The course consists of eight interactive lectures. In order to benefit from these lectures, we expect you to come to class prepared, meaning that you have read the required literature and completed the preparatory assignment of that week before class.