

# Master Health Sciences





# Programme

- ◆ General courses Quartile 1
- ◆ Specialisations Quartile 2
  - *Track: Personalized Monitoring and Coaching*
  - *Track: Optimization of Healthcare Processes*
  - *Track: Innovation in Public Health*
- ◆ Admission
- ◆ Questions and have a drink



Q1

Q2

Q3

Q4

PMC

Health Economic Modelling

- E-Health Development
- Telemedicine & Data Analysis
- Monitoring & Persuasive Coaching

Master Thesis

IPH

Stakeholder Preference Elicitation and Decision Support

- Public Health Innovations
- Citizen Science and Public Involvement
- Dynamics in Policy, Law and Regulation

Master Thesis

OHP

Data Science

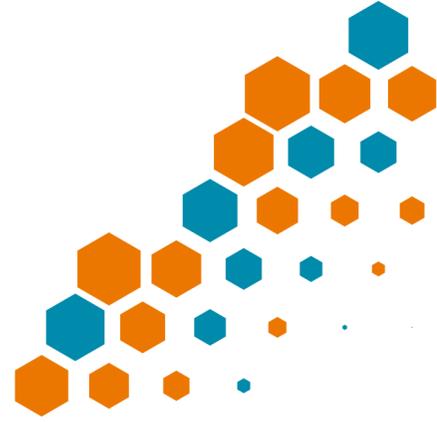
- Finance & Healthcare Purchasing
- Quality Management in Healthcare
- Optimizing Healthcare Processes

Master Thesis

PMC = Personalized Monitoring & Coaching

IPH = Innovation in public Health

OHP = Optimizing Healthcare Processes



# General courses Quartile 1

- Health Economic Modelling, 5EC
- Stakeholder Preference Elicitation and Decision Support , 5EC
- Data Science, 5EC



# Health Economic Modelling (HEM)



- Asses the impact of new medical innovations or interventions on health outcomes and costs
- Simulation
- R studio



# Stakeholder Preference Elicitation and Decision Support (SPECS)



- Healthcare decisions are complex and involve trade-offs
- Shared decision making, benefit risk assessment
- Perform a multi-criteria decision analysis
- COVID-19 example



# Data Science



- Prepare and analyse data to support or improve healthcare
- E.g.: Predicting surgical case durations for a Thorax centre



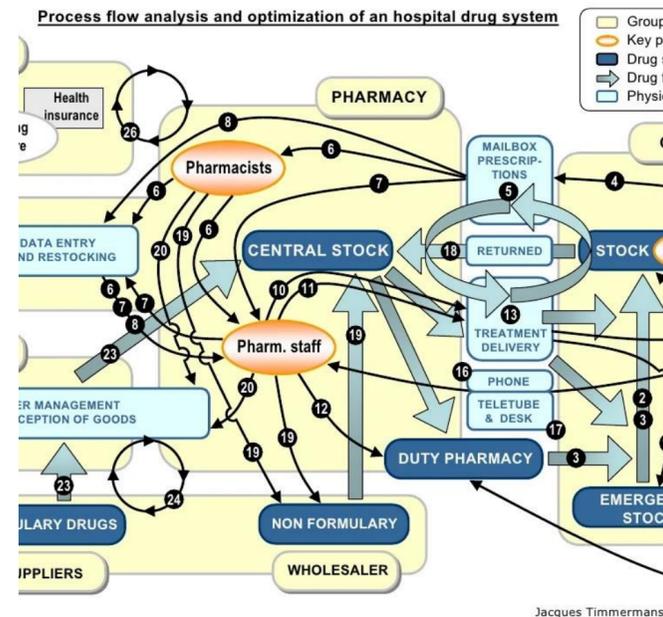
# What kind of specialisations do we offer?



Personalized  
Monitoring  
and Coaching



Optimization  
of Healthcare  
Processes



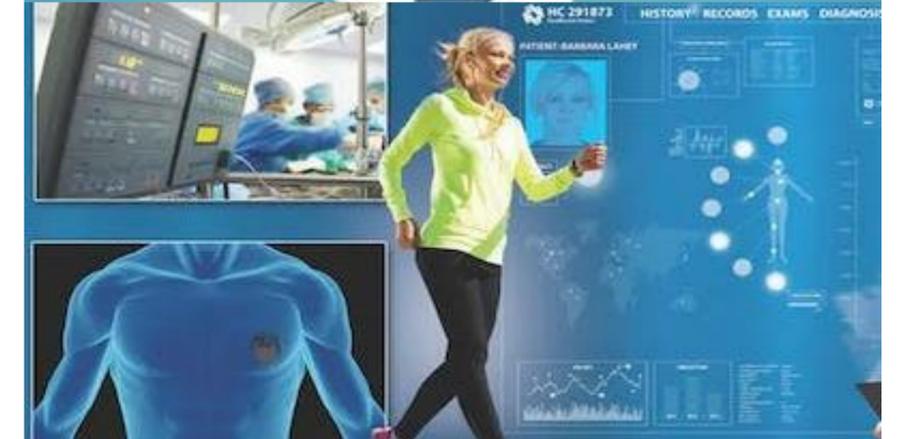
Innovation in  
Public Health



# Personalized Monitoring and Coaching



- ◆ eHealth Development: a Holistic Approach, 5EC
- ◆ eHealth for Remote Patient Monitoring and Decision, 5EC
- ◆ Monitoring and Persuasive Coaching, 5EC





# eHealth Development: a Holistic Approach

- Explore basic principles and theories of eHealth
- Development, implementation and evaluation of persuasive eHealth
- Evaluation of technologies
- Learn the CeHRes Roadmap





# eHealth for Remote Patient Monitoring & Decision

- Discover how technology can be used to gather information about health and wellbeing
- Measuring and processing data into relevant information for healthcare providers and the patient
- Develop a system for monitoring and coaching and present it to potential end users
- Graded with presentations and a report





# Monitoring and Persuasive Coaching

- Use the information from other courses for coaching and advice to individuals
- Use a number of specific design steps, from creating to realisation and evaluation
- Work on three practical projects
- Use a dataset to evaluate the use of existing eHealth platform for chronic diseases



# Personalized Monitoring and Coaching

- Job options:
  - Consultant at PinkRocade/Meditain
  - Product owner at Topicus Healthcare
  - PhD student or junior researcher at a university
  - Policy and quality advisor at Ambia
  - Functional designer at Impulse info systems
  - eHealth project member/coordinator at Transfore
  - Product analyst at Demcon



# Optimization of Healthcare Processes

- ◆ Finance and Healthcare Purchasing, 5EC
- ◆ Quality Management in Healthcare 5EC
- ◆ Optimizing Healthcare Processes 5EC

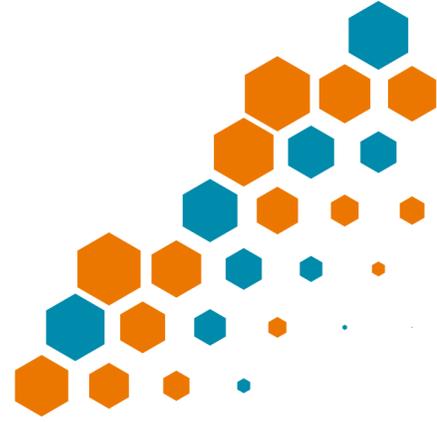




## Finance and Healthcare Purchasing

- Understand purchasing as a management issue
- Purchasing topics from the perspective of healthcare providers and insurers/municipalities
- Sourcing and contracting of care, the financial structure of the healthcare system and developments in healthcare procurement
- Graded by assignments, writing an article and an exam

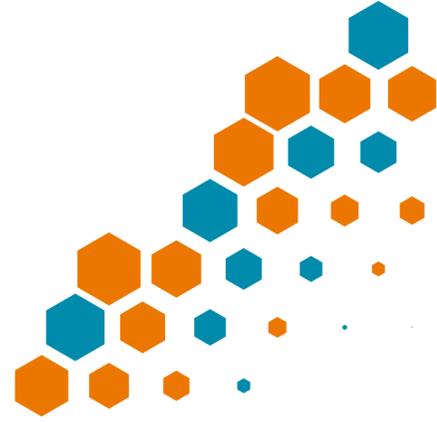




## Quality Management in Healthcare

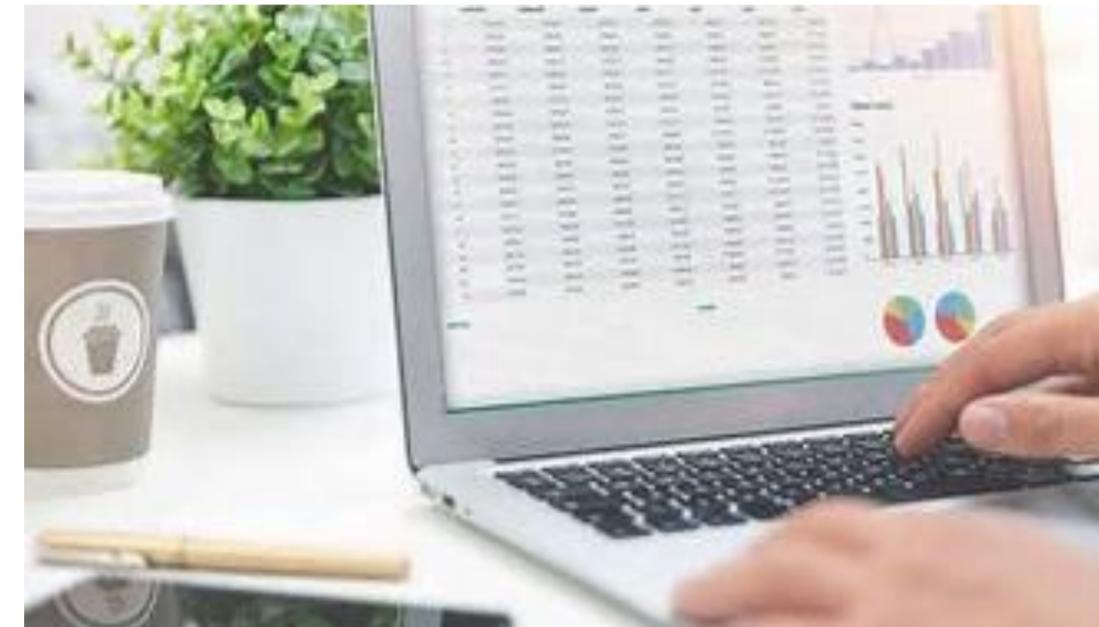
- Concepts of quality and safety in healthcare
- Analysis and improvement techniques
- What is quality, how to evaluate and improve it?
- How to implement safety management systems?
- How to communicate on quality and safety issues?
- Graded by a group assignment, an individual assignment and an exam
- Excursion to Rijnstate Hospital





# Optimizing Healthcare Processes

- Operations management topics in Healthcare
- Processes are analysed and optimized with tools e.g. simulation models with the use of Excel
- Managerial problem solving method (a 7-step tool to solve problems in a systematic way)
- Graded by an assignments and an exam



# Optimization of Healthcare Processes

Job options:

- Junior Researcher at for example IKNL
- Data analyst outcome indicators at a hospital
- Project leader implementing new care concepts
- Policy advisor in a healthcare facility
- Many more options.



# Innovation in Public Health

- ◆ Public Health Innovations, 5EC
- ◆ PH: Dynamics in Policy, Law and Regulation, 5EC
- ◆ Health Economics: Maximizing Societal Welfare, 5EC



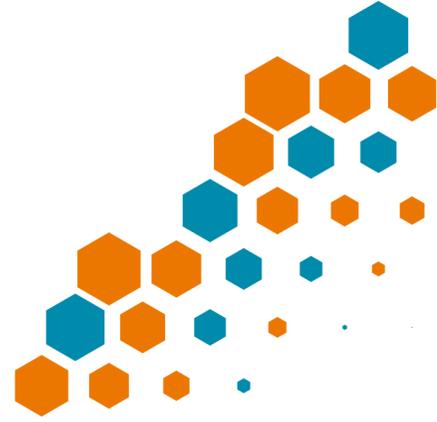




# PH: Dynamics in Policy, Law and Regulation

- Knowledge and tools necessary to be an active participant in the shaping of future public health policies
- Deep understanding of not only health and illness but also of matters related to policy-making, legislative processes and legal principles





# Health Economics: Maximizing Societal Welfare

- Demonstrate how health economic analysis can facilitate the achievement of improvements in the health of the population
- Potential market failures in the supply of health services and insurance
- Budget impact analysis and value frameworks



# Innovation in Public Health

Job options:

- Policy maker
- Advisor
- Scientist
- Consultant
- Inspector
- Manager
- Regulator
- Researcher





# Related Programs:



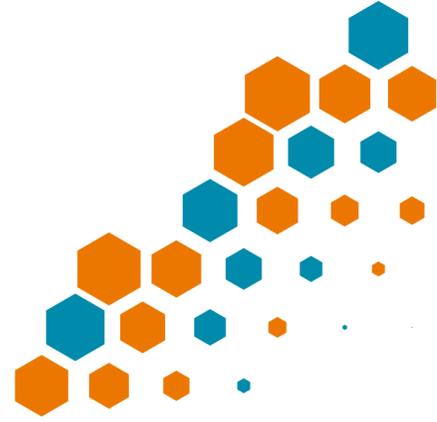
## HBO:

- Fysiotherapie
- Verpleegkunde
- Ergotherapie
- Sportkunde
- Gezondheid en Technologie
- Bestuurskunde
- Bedrijfskunde/ MER
- And other's

## WO:

- Health Sciences
- Medicine
- Psychology
- Public Administration
- Human Movement Sciences
- And other

# Premaster for HBO students:



## **Start February 30 EC:**

- eHealth development in context (5 EC, ENG)
- Economic Analysis & evaluation in Healthcare (5 EC, ENG)
- Research Methodology & Descriptive Statistics (5 EC, ENG)
- Optimalisatie van Zorg (15 EC, NL)

Enroll before January 1st!

## **Start September 30 EC**

- Healthcare Economics and Accounting (15 EC, ENG)
- Klinisch Wetenschappelijk onderzoek (15 EC, NL)

Enroll before August 1st!

# Premaster for WO students:



## **Start February 15 or 30 EC:**

- eHealth development in context (5 EC, ENG)
- Economic Analysis & evaluation in Healthcare (5 EC, ENG)
- (Research Methodology & Descriptive Statistics) (5 EC, ENG)
- And/or: To be determined on previous programma

Enroll before January 1st!

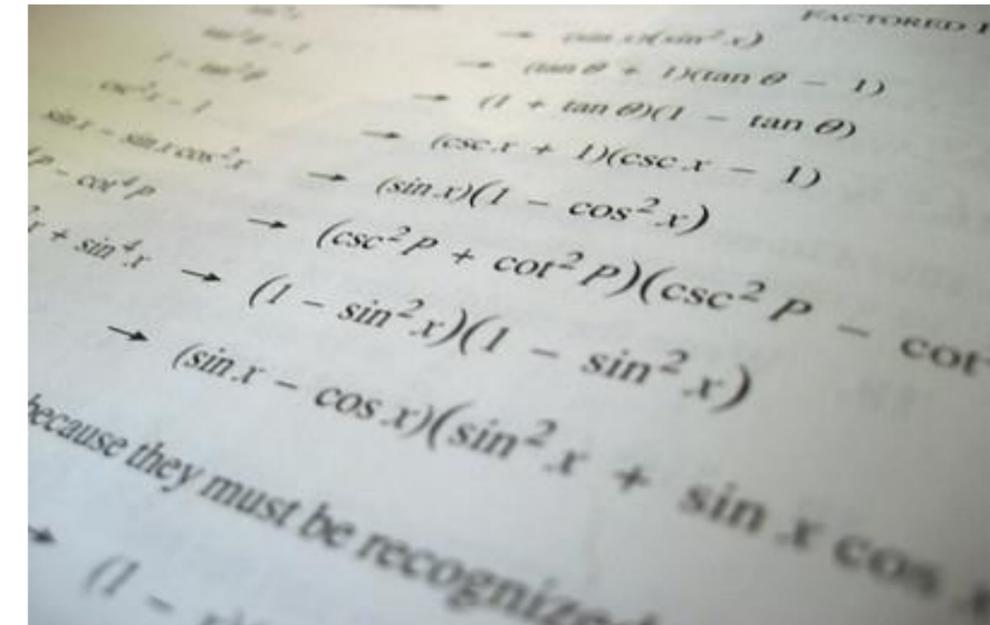
## **Start September 15 or 30 EC**

- Healthcare Economics and Accounting (15 EC, ENG)
- And/or: To be determined on previous programma

Enroll before August 1st!

# Math and English:

- Advise: take courses before the start of the premaster if you don't feel sure about these topics
- Level VWO (wiskunde A)
- Not mandatory!
- Saxion (niet-technische variant), NHA.nl or James Boswell Institute



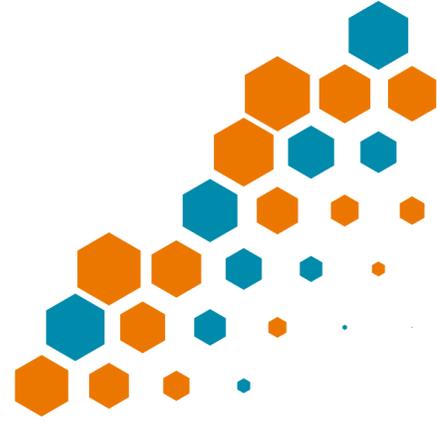


# International students:

- BSc very much related to Health Sciences (Public Health, Epidemiology e.g.)
- Sufficient knowledge in Research Methodology, Statistics and Health Economics
- Assessment by the Admission Committee



# Websites and contact:



- Websites:
  - Premaster: [www.utwente.nl/en/hs/pre-master](http://www.utwente.nl/en/hs/pre-master)
  - Master information: <https://www.utwente.nl/onderwijs/master/opleidingen/health-sciences/>
- Contact:
  - Study advisor: [a.h.prins@utwente.nl](mailto:a.h.prins@utwente.nl) ('live'/ teams): [tnw.planner.utwente.nl](http://tnw.planner.utwente.nl)
  - Study Information Centre (general information, questions about admission, scholarships, tuition-fee, e.a.): [www.utwente.nl/en/education/student-services](http://www.utwente.nl/en/education/student-services)



Questions ?!

