**eHealth – connecting Healthcare IT, medical devices, processes and people**

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**Questions**

- Target audience: Whom do we teach?
- Content: What do they have to know?
- Learning objectives and competence levels: Where and how far do we take them?
- Materials and methods: How do we teach and assess?

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**University of Applied Science Niederrhein**
**Faculty of Healthcare**

- 1.10.1971
- 13,600 students
- 60 Bachelor/ 20 Master
- HCM & eHealth 854
- 100 partner universities

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**Whom do we teach?**

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**What do we teach?**

“The delivery of healthcare services, where distance is a critical factor, by all healthcare professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of healthcare providers, all in the interests of advancing the health of individuals and their communities”.

**WHO**

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**What do they have to know?**

- General qualification for university entrance
- Alternative: examination § 66 HG
- English
- Internship healthcare facility (6 weeks)
- Internship IT (6 weeks)

→ Interest in science & healthcare
The start

- Mathematic
- Chemistry
- Informatics
- Economics
- Business arithmetics
- Medicine

Learning objectives / competence levels

- Medicine and Nursing Care:
  - Terminologies and medical documentation
  - Medicine, pharmacology, care
  - Medical guidelines
  - Knowledge of processes of care provision
- IT
  - Telemedicine, AAL
  - Data analysis, databases, network techniques
  - Programming language, software delivery skills
  - Privacy and security

Learning objectives / competence levels

- Technology:
  - Medical engineering
  - Medical technology: CT, MRT, ...
  - Imaging systems & techniques
  - Implants and micro systems
- Soft-Skills & Business admin.
  - Project management (IT, QM)
  - Process management
  - Communication
  - eLearning, Usability
  - Controlling

Organisation

- Fulltime
- Halftime
  - 6 semester
  - 8 semester
- DUAL
- Internship and Bachelor thesis
  → Bachelor of Science (B.Sc.)
- Master eHealth & Health Care Management

Materials and methods: How do we teach and assess?

- Practical experience, excursions
- eHealth Lab (HIS, MIS, CPOE, telemetry)
- Seminars and eLearning sessions
- Internship & Thesis

eHealth Landscape
Research projects
- Snomed CT
- LOINC
- eCl@ss
- IHE
- HL7
- GS1
- CDISC

Work offers hospitals
- Billing
- Accounting (DRGs)
- Controlling
- eSupply, eCommerce
- Medical documentation
- Decision support systems (CPOE)
- Security, privacy
- Implementation and support of IT - Systems

Work offers: Telemedicine
- Telepathology
- Telesurgery
- Teledermatology
- Telediagnostics
- Telecardiology
- Teleometry
- Telemonitoring
- Teleneurology
- Telespsychiatry
- Teleradiology
- Teletherapy

Work offers: authorities & others
- Gematik
- Vendors and Companies
  - Pharma
- Institutes: RKI, DIMDI
- IQWiG: Health Technology Assessment
- Integrated Care Organisations
- Insurance Companies
- Ministry of Health
- Offers all over the world (e.g. WHO)

Job Profile
- Industry
  - Projectmanager
  - Expert
- Authorities
  - Statisticians, Epidemiologist
- Research
  - Research Assistant
- Hospitals
  - Controller, Medical Documentation Specialists
  - Application Supporter
  - Process Manager
  - Risk Manager
- Pharma
  - Monitor
  - Coordinator of Studies

Thank you

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