



# Innovationsforum Hochschulmedizin

## 27. September 2018

Dr. med. Nils C. Thiessen, MME

Chief Medical Officer

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# Perspective

BECOMING A PHYSICIAN

FREE PREVIEW

## Lecture Halls without Lectures — A Proposal for Medical Education

Charles G. Prober, M.D., and Chip Heath, Ph.D.

Medical education in this era of a vast medical canon can be improved without increasing the time it takes to earn a medical degree, if we make lessons “stickier” and embrace a learning strategy that is self-paced and mastery-based and that boosts engagement.

Prober, C.G., & Heath, C., NEJM, 366:18 (2012)



# Perspective

AUGUST 17, 2017

## Saying Goodbye to Lectures in Medical School — Paradigm Shift or Passing Fad?

Richard M. Schwartzstein, M.D., and David H. Roberts, M.D.

“**B**ecome a doctor, no lectures required.”  
This headline about the University of Vermont’s proposed new approach to medical

lowed. We can often serve our students best by fusing elements of various methods, such as team-based or case-based learning and interactive large-group learning sessions, rather than feeling obliged to adhere to a particular format. But we must also use evi-

Schwartzstein, RM, Roberts, DH, NEJM, 377:605 (2017)

# Regelmäßiger Praxisbezug in Kombination mit kooperativem Lernen online



Relevantes Curriculum  
Kompetenzbasierte Lernziele

Praxisbezug  
Netzwerk von Lehrkrankenhäusern

EDU – a  
degree  
smarter

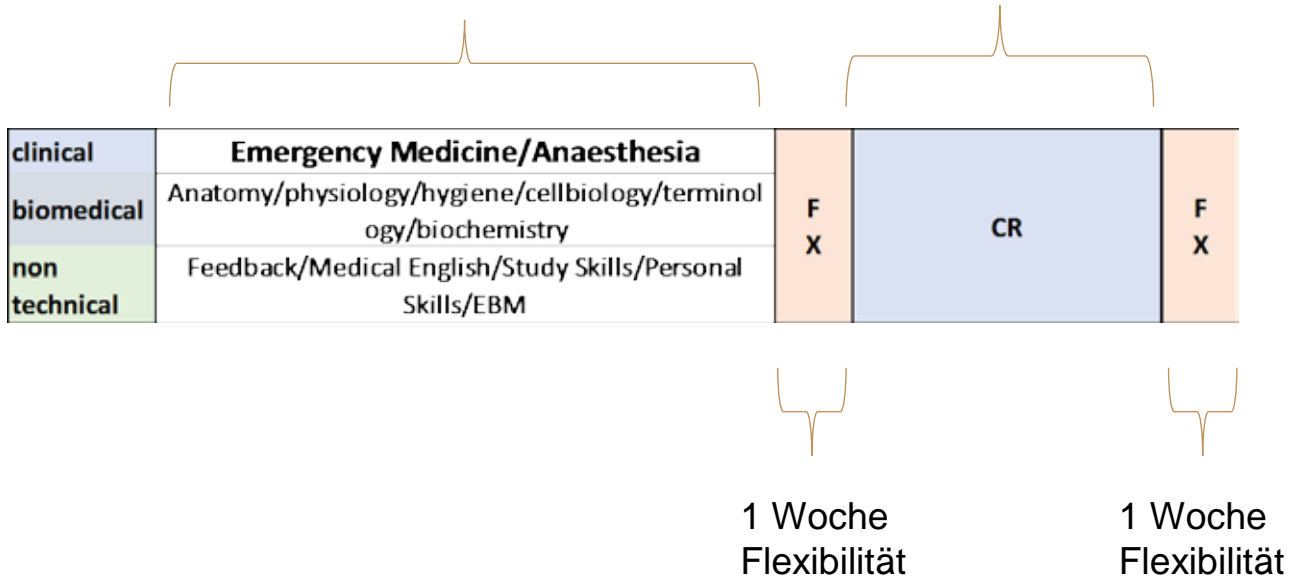
“Collaborative Learning”  
Digitale Lernplattform

Formative & Summative  
Assessments  
Longitudinale Assessments

- **Kompetenzbasierte Lernziele (Taxonomy of Bloom)**
- **Übergeordnete Lernziele (Institute for International Medical Education)**
- **Global Standards (World Federation of Medical Education (WFME))**
- **Learning Outcomes/Competences for Undergraduate Medical Education in Europe**
  - **The Tuning Project (Medicine)\***
- **Diverse Lernzielkataloge:**  
**NKLM, the Scottish Doctor, Schweizer Lernzielkatalog, Framework of Undergraduate Medical Education in the Netherlands, Tomorrows doctors UK**

\*Projekt der Europäischen Kommission.

8 Wochen “Collaborative Learning”    4 Wochen klinische Rotation



# Blueprint EDU Kern-Curriculum

| weeks  |               | 1   | 2 | 3 | 4 | 5 | 6  | 7 | 8 | 9 | 10 | 11   | 12 | 13 | 14 | 15 | 16                              | 17 | 18 | 19 | 20 | 21   | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31   | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 |
|--|---------------|---|---|---|---|---|--|---|---|---|----|--|----|----|----|----|---------------------------------|----|----|----|----|--|----|----|----|----|----|----|----|----|----|--|----|----|----|----|----|----|----|----|----|----|----|
| <b>Bachelor of Medicine</b>                            |               |   |   |   |   |   |  |   |   |   |    |  |    |    |    |    |                                 |    |    |    |    |  |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |    |    |    |
| 1  | clinical      | <b>Emergency Medicine/Anaesthesia (Prof. Meier-Hellmann)</b>                |   |   |   |   |  |   |   |   |    | <b>General Practice/Family Medicine (PO. Dr. Bruck)</b>  |    |    |    |    |                                 |    |    |    |    | <b>Internal medicine (Prof. Berliner)</b>              |    |    |    |    |    |    |    |    |    | <b>Geriatrics/Forensic medicine</b>                                    |    |    |    |    |    |    |    |    |    |    |    |
|  | biomedical    | Anatomy/physiology/hygiene/cellbiology/terminalogy/biochemistry             |   |   |   |   |  |   |   |   |    | Anatomy/physiology/biochemistry/cellbiology/Pharmacology                                       |    |    |    |    |                                 |    |    |    |    | Anatomy/physiology/biochemistry                        |    |    |    |    |    |    |    |    |    | Ethics/Lifelong Learning/Personal Development/Professional Development |    |    |    |    |    |    |    |    |    |    |    |
|  | non-technical | Feedback/Medical English/Study Skills/Personal Skills/TEAM                  |   |   |   |   |  |   |   |   |    | Learning Cycle/Learning Styles   |    |    |    |    |                                 |    |    |    |    |  |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |    |    |    |
| <b>Group Assignments &amp; Longitudinal Assessment</b> |               |   |   |   |   |   |  |   |   |   |    |  |    |    |    |    |                                 |    |    |    |    |  |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |    |    |    |
| 2  | clinical      | <b>Dermatology (Prof. Kreuter)</b>  |   |   |   |   | <b>Urology (Prof. Steiner)</b>                 |   |   |   |    | <b>Internal Medicine/General Practice (Prof. Kiesslich, PO. Dr. Bruck, PO. Dr. Reichardt)</b>  |    |    |    |    |                                 |    |    |    |    | <b>Surgery/Diagnostic Radiology (Prof. Strik)</b>      |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |    |    |    |
|  | biomedical    | Pharmacology/Pathology/Microbiology/Immunology                              |   |   |   |   | Pharmacology/Pathology/Microbiology/Immunology |   |   |   |    | Pharmacology/Pathology/Microbiology/Immunology   |    |    |    |    |                                 |    |    |    |    | Pharmacology/Microbiology/Immunology                   |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |    |    |    |
|  | non-technical | Learning Approaches/Learning Styles   |   |   |   |   |  |   |   |   |    | Critical Thinking/Interpersonal Skills   |    |    |    |    |                                 |    |    |    |    | Personal Skills for Body & Mind                        |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |    |    |    |
| <b>Group Assignments &amp; Longitudinal Assessment</b> |               |   |   |   |   |   |  |   |   |   |    |  |    |    |    |    |                                 |    |    |    |    |  |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |    |    |    |
| 3  | clinical      | <b>Orthopaedics/Traumatology/Physiotherapy/Rehabilitation (Prof. Kraft)</b> |   |   |   |   |  |   |   |   |    | <b>Ear/Nose/Throat/Pediatric Ophthalmology (Prof. Weire Carl, Prof. Witschack, Prof. Blum)</b> |    |    |    |    |                                 |    |    |    |    | <b>Mental Health &amp; Psychiatry (Prof. Schönker)</b> |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |    |    |    |
|  | biomedical    | Clinical Informatics  |   |   |   |   |  |   |   |   |    | Clinical Chemistry/Immunology  |    |    |    |    |                                 |    |    |    |    | Ethics   |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |    |    |    |
|  | non-technical | Team Based Care/Quality Improvement Skills                                  |   |   |   |   |  |   |   |   |    | Rudeness/Speaking Up   |    |    |    |    |                                 |    |    |    |    | Leadership Skills                                      |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |    |    |    |
| <b>Group Assignments &amp; Longitudinal Assessment</b> |               |   |   |   |   |   |  |   |   |   |    |  |    |    |    |    |                                 |    |    |    |    |  |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |    |    |    |
| <b>Doctor of Medicine</b>                              |               |   |   |   |   |   |  |   |   |   |    |  |    |    |    |    |                                 |    |    |    |    |  |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |    |    |    |
| 4  | clinical      | <b>Obstetrics/Gynaecology (Prof. Friedrich)</b>                             |   |   |   |   |  |   |   |   |    | <b>Paediatrics (Prof. Schweigerer)</b>   |    |    |    |    |                                 |    |    |    |    | <b>Master Thesis (Prof. Hoefl)</b>                     |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |    |    |    |
|  | biomedical    | Anatomy/physiology/Pharmacology   |   |   |   |   |  |   |   |   |    | Anatomy/physiology/Pharmacology  |    |    |    |    |                                 |    |    |    |    | Biomedical statistics/Epidemiology                     |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |    |    |    |
|  | non-technical | Quality Improvement skills/Scholarship                                      |   |   |   |   |  |   |   |   |    | Project management   |    |    |    |    |                                 |    |    |    |    | Evidence based medicine                                |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |    |    |    |
| <b>Group Assignments &amp; Longitudinal Assessment</b> |               |   |   |   |   |   |  |   |   |   |    |  |    |    |    |    |                                 |    |    |    |    |  |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |    |    |    |
| 5  | clinical      | <b>Neurology (Prof. Stoffel)</b>  |   |   |   |   |  |   |   |   |    | <b>Geriatrics (Prof. Berliner)</b>   |    |    |    |    | <b>Complementary Medicine</b>   |    |    |    |    | <b>Option Track</b>                                    |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |    |    |    |
|  | biomedical    | Anatomy/physiology/Pharmacology   |   |   |   |   |  |   |   |   |    | Anatomy/physiology/Pharmacology  |    |    |    |    | Anatomy/physiology/Pharmacology |    |    |    |    | Anatomy/physiology/Pharmacology                        |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |    |    |    |
|  | non-technical | Medical professionalism   |   |   |   |   |  |   |   |   |    | Change management  |    |    |    |    |                                 |    |    |    |    | Leadership   |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |    |    |    |
| <b>Group Assignments &amp; Longitudinal Assessment</b> |               |   |   |   |   |   |  |   |   |   |    |  |    |    |    |    |                                 |    |    |    |    |  |    |    |    |    |    |    |    |    |    |  |    |    |    |    |    |    |    |    |    |    |    |



## Rolle der “Teaching Hospitals”

- 3 x 4 Wochen klinische Rotationen / Jahr
- **Arzt: Studierendenverhältnis auf Station: 1:1**
- Kleingruppenseminare mit **5 Studierenden**
- **Modulkoordinator**



## Klinisches Lehrpersonal

- Enge Betreuung durch **Ärzt\*innen**
- Unterstützung durch **Tutoren** und **Mentoren**
- Professionelles **Feedback** nach Feedbackregeln

## Auswahl der Teaching Hospitals

- Auswahl nach Qualitätskriterien
- Vorgaben der National Commission for Further and Higher Education in Malta

# Lernen ist eine individuelle Aufgabe - die aber online „collaborativ“ unterstützt werden kann

## 1. Team-based Learning

- § Problembasiertes Lernen in Kleingruppen
- § Group Assignments
- § Maximal 5 Studierende pro Gruppe
- § Virtual classroom



## 2. Peer-Learning

- § Voneinander und miteinander lernen
- § Virtual classroom
- § Online Campus

## 3. Mentoring & Tutoring

- § Ärztliche Tutoren begleiten die Online-Lerngruppen
- § Mentoren begleiten online die persönliche Weiterentwicklung



# "Assessment drives learning"

- Klare, vordefinierte Lernziele
- Portfolios online

Performance  
Feedback

Formative  
Assessment



Summative  
Assessment



## Teaching Hospital:

- Mini-Clinical Evaluation Exercises (Mini-Cex)
- Direct Observation of Procedural Skills (DOPS)
- 360° Feedback



## Online Platform:

- Weekly Collaborative Assignments
- Proctored online written tests





[Home](#) [My Studies](#) [Lab](#) [Library](#) [Forum](#) [Student Life](#)

Study Week 3/7



## Programme News

02 Jul [Week 2 Updates](#)  
02 Jul [Welcome to Week 3](#)  
26 Jun [Assignment 1 Updates](#)

[+ MORE](#)

## My Tasks

[Publish my Draft Submiss...](#)  
[Practice for Exam](#)  
[Prepare for Clinical Rotation](#)



**Alexandra**  
Settings

 Messages 0  
 Contact Tech Support

### My Team (3)



 Contact Team

 Evaluations 0

 Comments 1



Topic: **Clinical Competencies**

You're ready to take the final Clinical Competencies Exam!

[Take Exam Now](#)



Topic: **Clinical Competencies**

Practice for Upcoming Exam  
Review your knowledge

[Go to AMBOSS Now](#)

## Your Current Assignment

[Study Week 3](#)

## Popular Resources

[Therapeutic hypothermia](#)

[Therapeutic hypothermia](#)

[Therapeutic hypothermia](#)

[Therapeutic hypothermia](#)

## Hot Discussions

[Introductions](#)

All materials available for



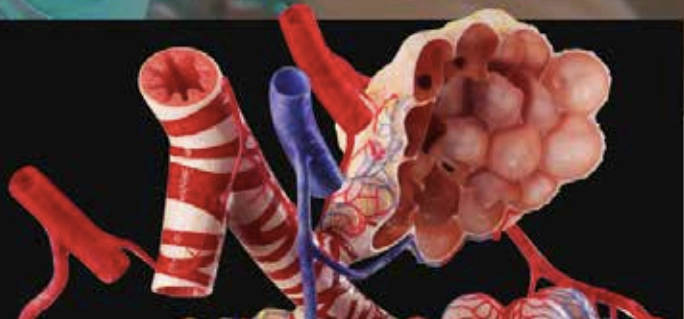
**3D4MEDICAL**  
Transforming Medical Learning

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medical education platform



## Complete **Anatomy** 2019

The world's best-selling and most  
complete 3D anatomy platform, updated  
for the 2019 academic year





Draw it to Know it<sup>®</sup>  
MEDICAL & BIOLOGICAL SCIENCES

**INTRINSIC FOOT MUSCLES — DORSAL (EXTENSORS)**

**Muscles**

- ✓ Extensor digitorum brevis
- ✓ Extensor hallucis brevis

**Primary Actions**

- ✓ Toe 2 - 4 — Extension

**MUSCLE ANATOMY**  
Lateral (←) → Medial



**MUSCLE FEATURES**

| MUSCLE                    | ORIGIN                            | INSERTION                               | ACTION   |
|---------------------------|-----------------------------------|---|--|
| Extensor digitorum brevis | Calcaneus (superolateral surface) | Extensor hoods (phalanges digits 2 - 4) | Toes 2 - 4 — Extension<br><br>Toe 5 is extended via tendon of extensor digitorum longus (in the leg) |
| Extensor hallucis brevis  | Calcaneus (dorsal surface)        | Great toe (proximal phalanx)            | Toe 1 — Extension  |

## Graduate/Medical



**Neuroanatomy**  
Neuroanatomy & Fundamental Clinical Neuroscience



**Gross Anatomy**  
Microscopic Structure of Tissues & Organs



**Physiology**  
Molecular, Cellular, & Organ System Interactions



**Embryology**  
Formation, Growth, Development & the Developmental Disorders



**Cell Biology**  
Cellular Structure & Function



**Biochemistry**  
Integration of Chemical & Physiological Processes



**Immunology/Microbiology**  
In Development



**Histology**  
Microscopic Structure of Tissues & Organs



**Pathology**  
In Development



**Pharmacology**  
In Development



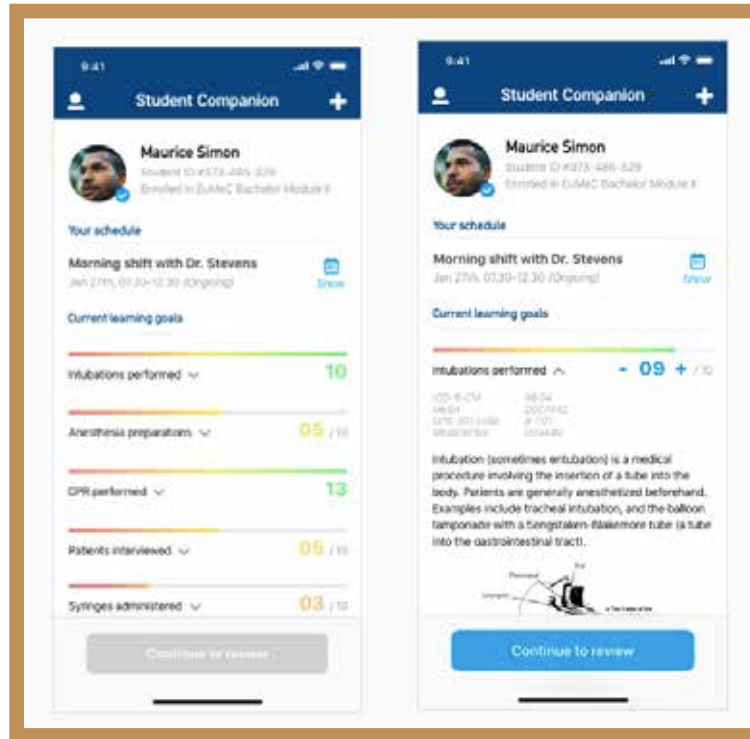
„Ich habe ausschließlich mit Amboss gelernt und bin durchaus stolz gerade so die Eins geknackt zu haben ;-).“

Matthias Brendel, LMU-München

“I have learned exclusively with Amboss and I am quite proud to have just cracked grade A ;-).”

Matthias, Brendel, Munich

# Mobile App for Clinical Rotations





# 3-stufiges Zulassungsverfahren

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## Phase I:

- ü Hochschulzugangsberechtigung
- ü CV
- ü Motivationsschreiben

## Phase II:

- ü Kein NC: "Cognitive Skills Test"

## Phase III:

- ü Strukturiertes Interview



## Higher Education Strategy

- **EU Member State**  
(EU Directive 2005/36)
- **Project for strategic direction and priorities for the European Union's programming period of 2014-2020**
- **New Accreditation Guidelines since 22<sup>nd</sup> April 2015 with special emphasis for online and blended learning concepts**
- **Official Language for Accreditation English**
- **Strictly regulated accreditation process with strict timelines (3 cycles of 30 + 20 working days)**
- **High quality requirements**

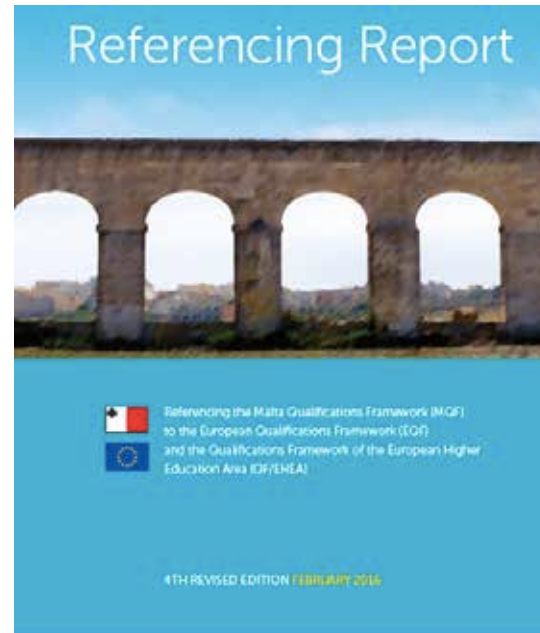


## Eligibility for Provider Accreditation

- 1. **Accredited programme on the Qualifications Framework/European Qualification Framework;**
- 2. **Intense Due diligence tests on academic staff and faculty;**
- 3. **Elaborate Internal Quality Assurance Policy;**
- 4. **Compliance with venue regulations**

**Malta**

## Programme Accreditation



# Founding Faculty

## **Prof. Dr. med. Andreas Hoeft (Chairman)**

Chair Dept. of Anaesthesiology and Intensive Care Medicine  
 University Hospital Bonn  
 Germany

### **Prof. Dr. med. Wolfgang Buhre**

Chair Dept. of Anaesthesiology  
 Maastricht UMC  
 Netherlands

### **Prof. Dr. Dr. h.c. Günter Burg**

Director em. Dermatology & Dermato-Oncology  
 University Hospital Zurich  
 Switzerland

### **Prof. Mahmoud Elfiky**

Surgery and Pediatric Surgery  
 University of Cairo  
 Egypt

### **Prof. Bruce Biccard**

Second Chair Dept. of Anaesthesiology  
 Groote Schuur Hospital  
 South Africa

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Director Institute of Virology  
 Charité - University Medicine Berlin  
 Germany

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Chair Dept. of Cardiology  
 Tel-Aviv Sourasky Medical Center  
 Israel

### **Prof. Idit Matot**

Chair Dept. of Anaesthesiology  
 Tel-Aviv Sourasky Medical Center  
 Israel

### **Dr. Bernard Mbwele, MSc Clin. Res, Proj Mgt**

Epidemiology and Biostatistics  
 University of Dar es Salaam  
 Tanzania

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Chair Dept. of Cellbiology  
 University of Tel Aviv  
 Israel

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Protector Studies and Teaching  
 Medical School Hamburg  
 Germany

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Chair Dept. of Anaesthesiology  
 and Intensive Care  
 University of Genoa  
 Italy

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 and Health Legislation  
 Sträter Lawyers, Bonn  
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Chair Anaesthesiology and Pain Medicine  
 Inselspital, University Hospital Bern  
 Switzerland

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 University Hospital Bonn  
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Chief Physician  
 Department Internal Medicine Oncology  
 HELIOS Clinics Berlin-Buch

### PD. Dr. med. Heike Bruck

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 Department Internal Medicine  
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Chief Physician  
 Department Dermatology  
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### Apl. Professor Dr. med. habil. Thomas Hermann Erich Steiner

Chief Physician  
 Department Urology  
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Chief Physician  
 Department Surgery  
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# Founder



## **Prof. Dr. med. Andreas Hoeff**

Co-founder and Dean of EuMeC.  
37 years of experience as a physician,  
15 years board member and head of medical  
management, University Hospital Bonn, Chair of  
Scientific Committee of the European Society of  
Anaesthesiology.

**"Sustainable approach for centered care will  
revolutionize medical education"**



## **Holm Keller**

Co-founder, Expert in Networked Education and  
Political Advisor. 20 years of experience in business  
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management.

**"Collaborative learning will make a decisive change  
for the quality of education"**



## **Alexander Jahn**

Co-founder. Former CEO of Candena GmbH. More than 12  
years of executive experience in the media and Internet  
industry, former Vice President Digital Media at  
Bertelsmann Inc.



## **Dr. Jürgen Laartz**

Co-founder, seed investor and Strategic Advisor. 24  
years of experience as director of the technology  
office at McKinsey,

**"Digitization can unlock the scalability barrier for  
high-quality education"**



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27. September 2018**

**Vielen Dank für Ihre Aufmerksamkeit!**

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