

Diversified and Multilevel Teaching Needs of Epidemiology in China

An PAN, PhD, Dean

SPH, Huazhong Univ. of Sci & Tech, Wuhan, China

Na HE, PhD, Dean

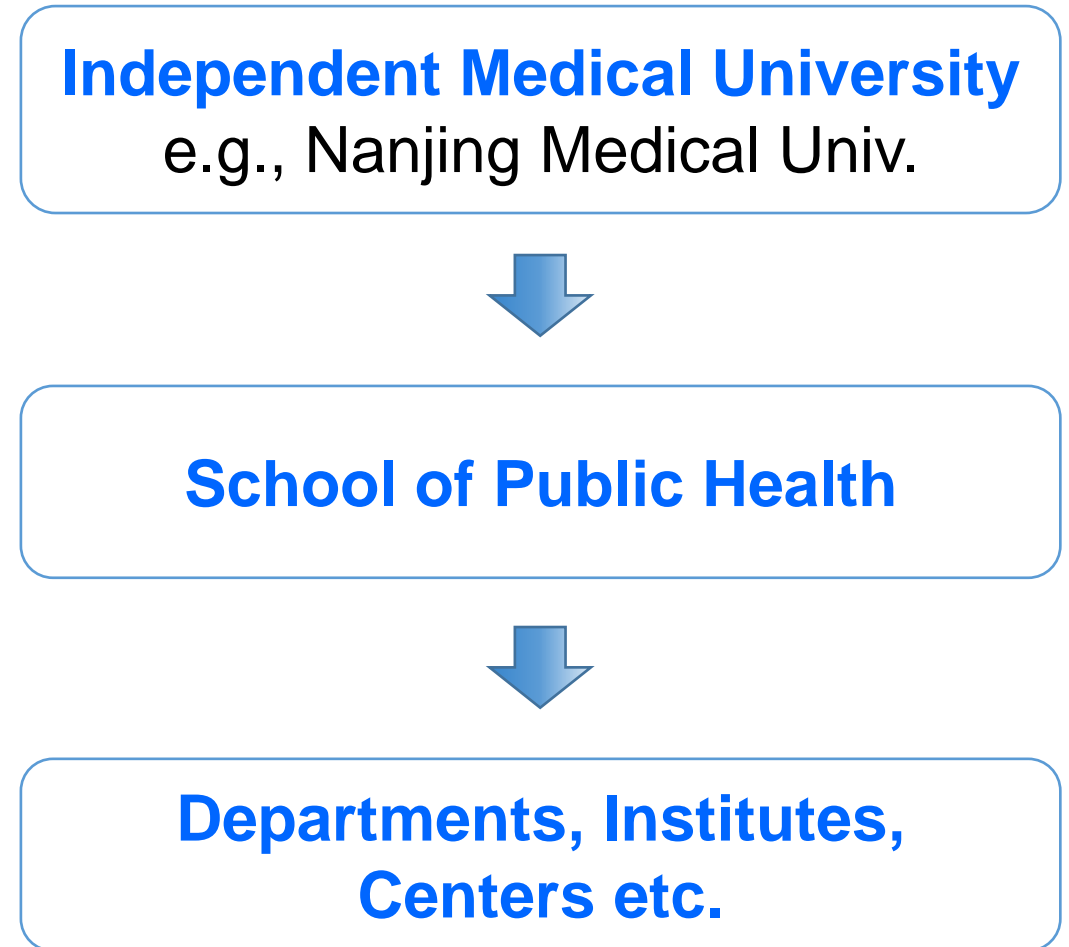
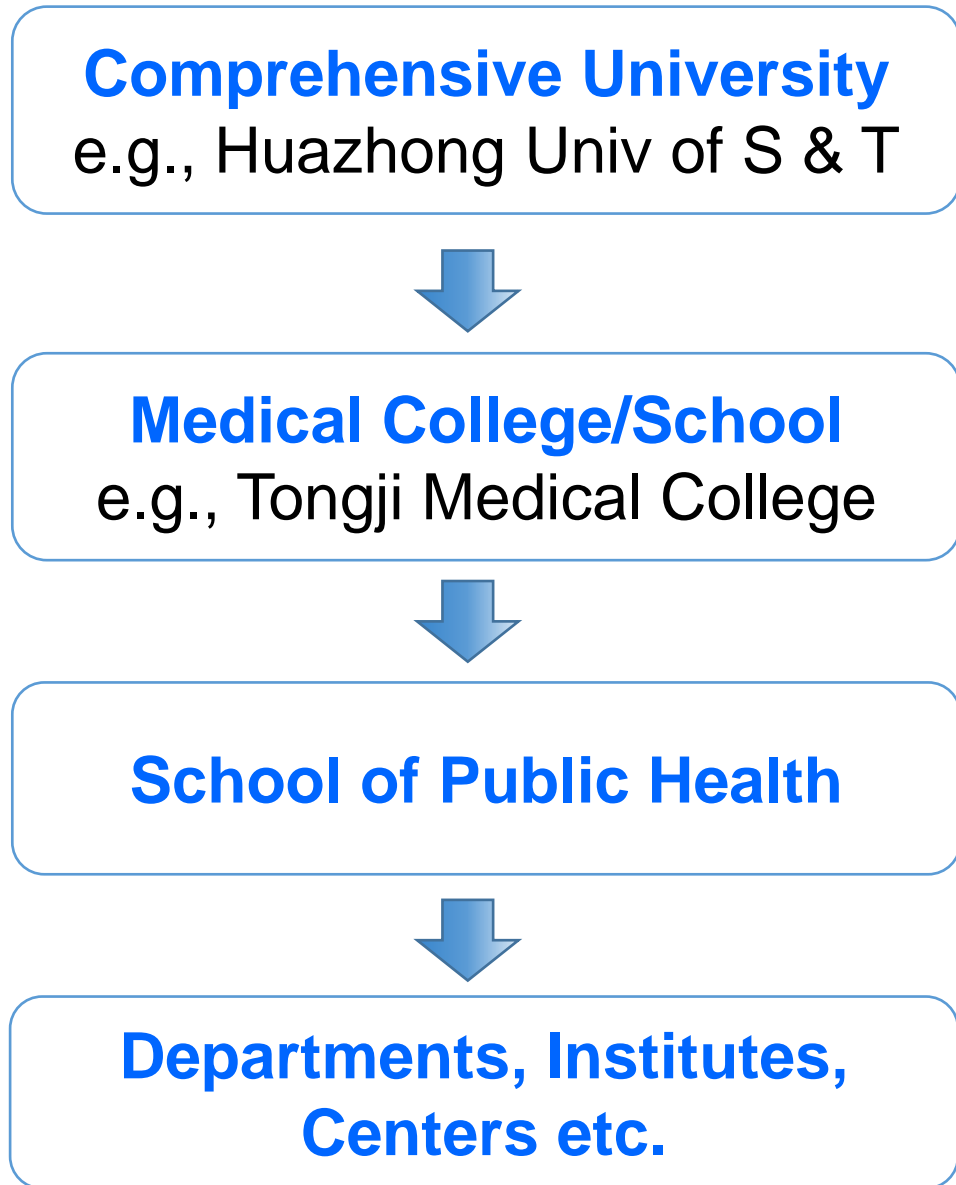
SPH, Fudan Univ., Shanghai, China

2024 WCE

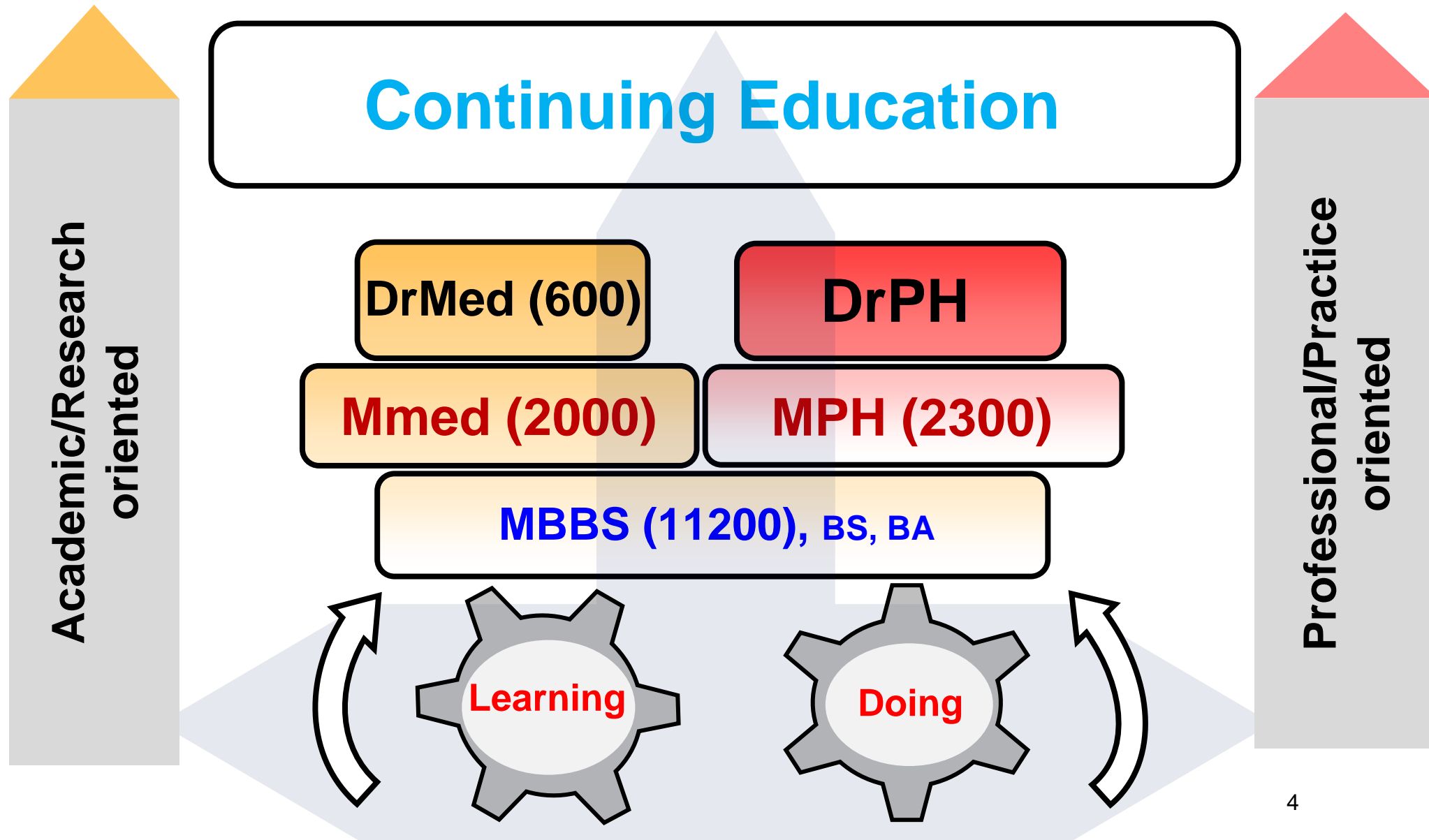
Core Competencies of Public Health Professionals

- **The American Council on Linkages Between Academia and Public Health Practice :**
 - **Data Analytics and Assessment Skills**
 - **Policy Development and Program Planning Skills**
 - **Communication Skills**
 - **Health Equity Skills**
 - **Community Partnership Skills**
 - **Public Health Sciences Skills**
 - **Management and Finance Skills**
 - **Leadership and Systems Thinking Skills**

Infrastructure of School of Public Health in China



Multilevel Education Programs in A School of Public Health and Multilevel Schools of Public Health in China



Learning and Doing for Public Health in China

Theoretical

- Public health sciences
- General medicine
- Social & behavioral sciences
- Health management
- Humanities
- Computer & information sciences
- Life science
- Environmental science
-

Multi-disciplines



Practical

- **Basic clinical skills (16-24 weeks)**
- **Practice in CDC (12-16 weeks)**
 - ✓ Responding to public health emergence
 - ✓ Field investigation
 - ✓ Laboratory techniques
 - ✓ Identification and assessment of risks
 - ✓ Prevention and intervention
 - ✓ Communication & Partnership
 - ✓

**Epidemiology
&
Biostatistics**

Global perspectives

Multi-capacities

Strategy and Multiple Choices of Epi Courses for Specified Education Programs and Training Needs

Course Library: courses (theoretical/practical) + specified education programs + skill/competency labels + basic/advanced labels



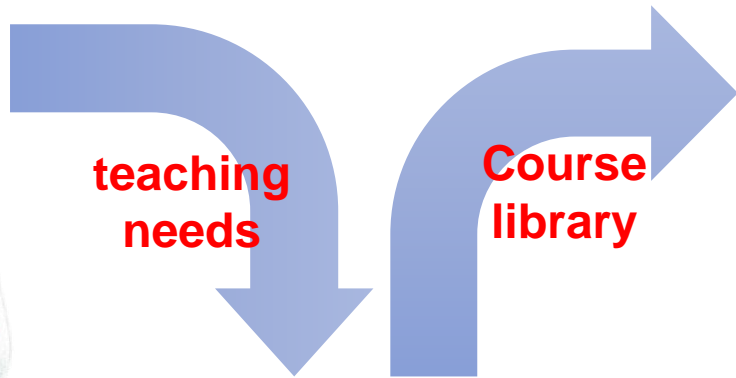
Targeted groups--curriculum for in-school/in-class students or professionals: competencies + level requirements



Individualized—curriculum for individuals with special needs

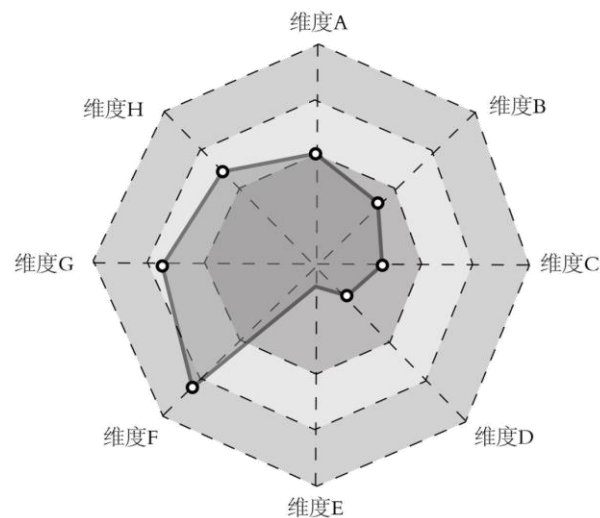
Build curriculum for specific education program

Students or Health professionals



					Needs				
Course1	√	×	√	×	×	√	×	√	Basic
Course2	×	√	√	√	×	×	√	√	Basic
Course3	√	×	√	×	×	√	×	√	Adv.
Course4	×	√	√	√	√	×	√	√	Adv.
Course5	√	×	√	×	√	√	×	√	Adv.
Course6	√	×	√	×	×	√	×	√	Adv.
Course7	×	√	√	√	×	×	√	√	Basic
Course8	×	√	√	√	×	×	√	√	Adv.
Course9	√	×	√	×	√	√	×	√	Adv.
Course10	×	√	√	√	×	×	√	√	Adv.
Course11	√	×	√	×	×	√	×	√	Adv.
.....	×	√	√	√	√	×	√	√	Adv.
CourseN	Basic

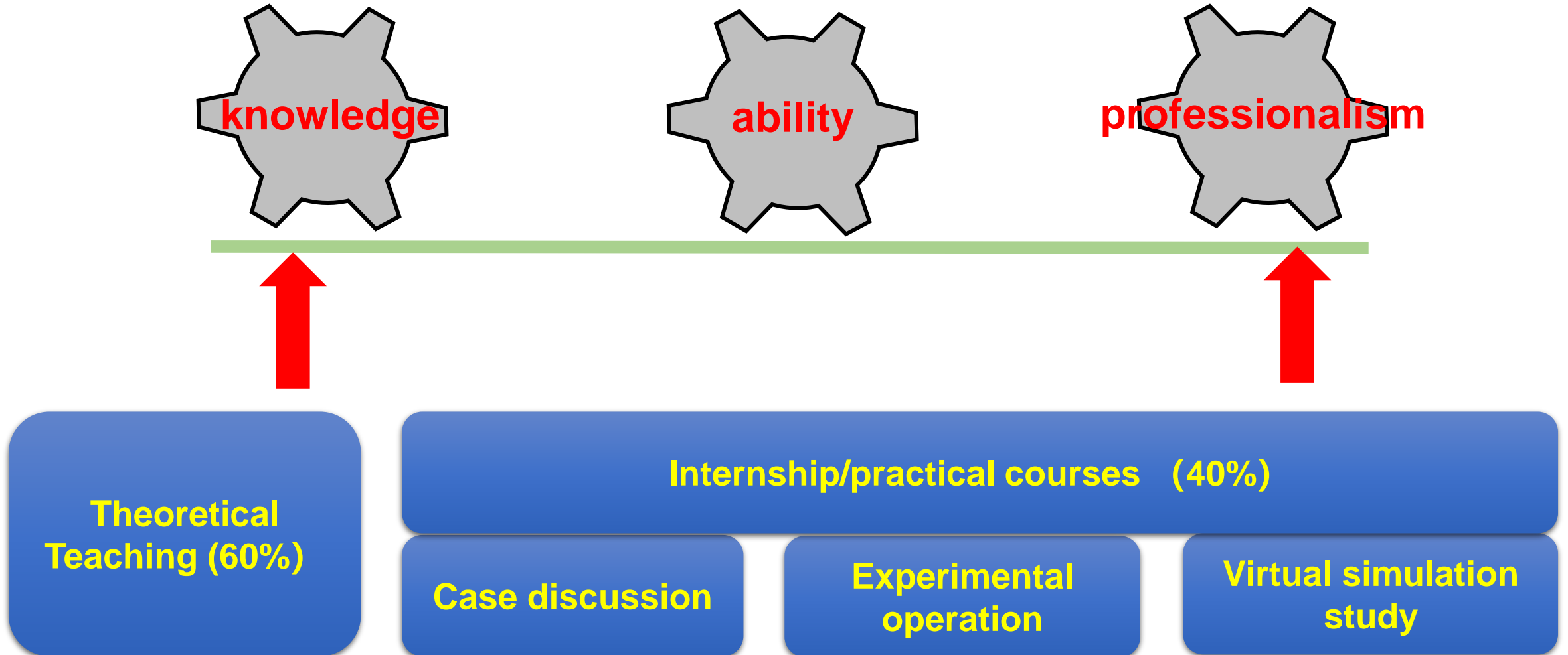
Build curriculum for specific education program



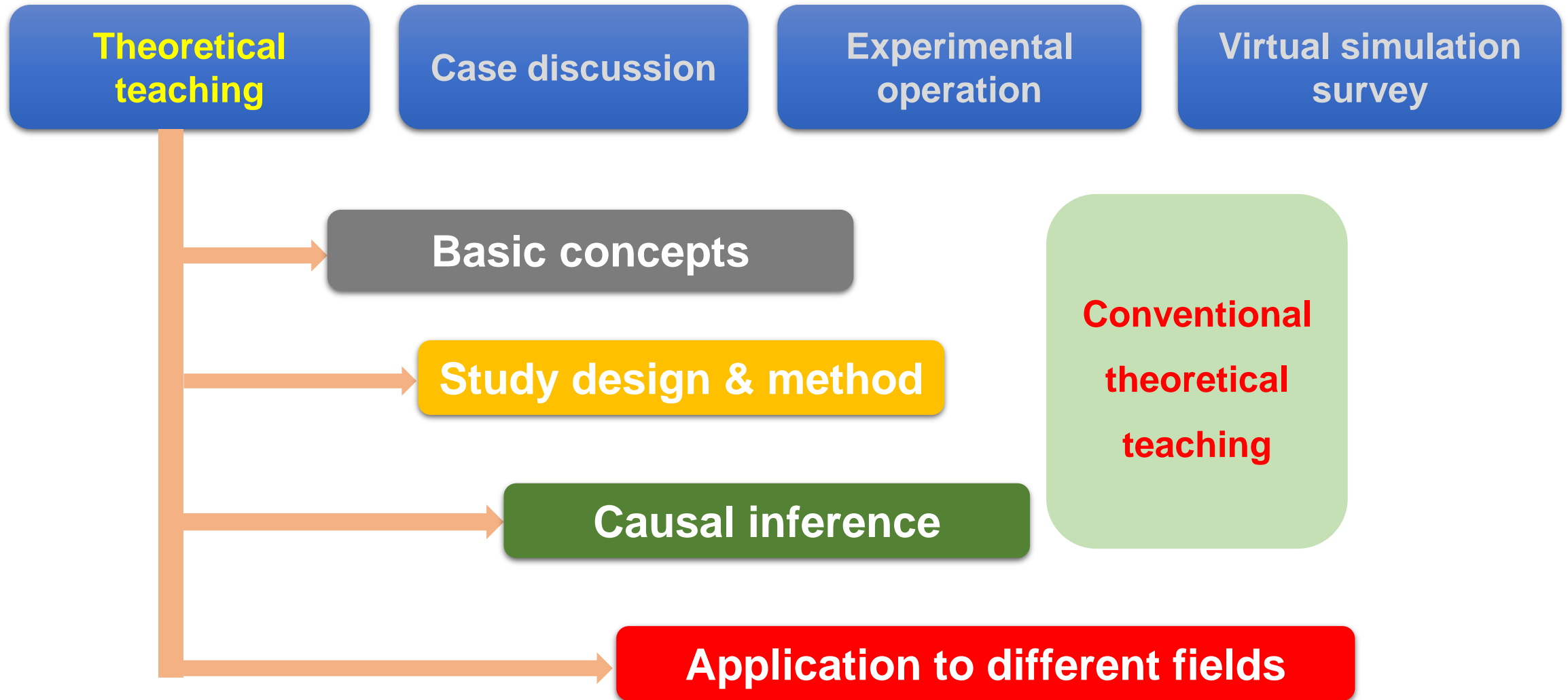
Epi course library

Example from HUST	Undergraduate	MMed	DrMed	MPH	DrPH
Introductory EPI	✓				
Principles/Methods in EPI		✓		✓	
Clinical EPI		✓			
Nutritional EPI		✓			
Field EPI				✓	
Cohort Study		✓	✓	✓	✓
Genetic & Molecular Epi		✓	✓	✓	✓
Public Health Emergency Management				✓	
Advanced EPI			✓		✓
EPI research		✓	✓		✓
EPI practice				✓	✓
Thesis		✓		✓	
Dissertation			✓		✓

Outcome-Based Education



Diverse teaching forms



Undergraduate Epi course for SPH students

Conceptual framework (8h)	Principle and methods (42h)	Prevention and control of diseases (38h)
<ul style="list-style-type: none">• Introduction (2h)• Disease distribution (2h)• Measurement indicators (4h)	<ul style="list-style-type: none">• Descriptive study (6h)• Case-control study (8h)• Cohort study (8h)• Experimental study (8h)• Screening (8h)• Systematic review and meta-analysis (2h)• Principle of causal inference (2h)	<ul style="list-style-type: none">• Epidemiology of emergencies (4h)• Prevention and control of infectious disease (4h)• Respiratory infectious diseases (4h)• Influenza (2h)• Tuberculosis (2h)• Digestive infectious diseases (4h)• Viral hepatitis (2h)• Cancer epidemiology (4h)• Diabetes epidemiology (4h)• Nutrition epidemiology (4h)• Injury epidemiology (2h)• Molecular epidemiology (2h)

Tongji Summer School



Opening Ceremony of 2022 Tongji Summer School, HUST



Tongji Summer School



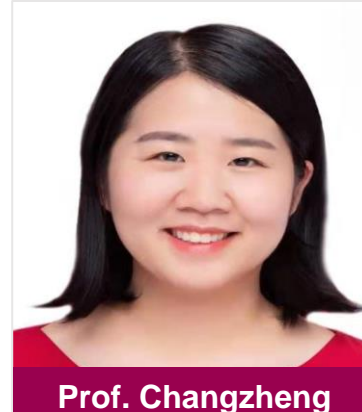
Prof. Sara Hagg



Prof. Oscar Franco



Prof. Fang Fang



Prof. Changzheng Yuan



Prof. Koh Woon Puay



Genetic and Molecular Epidemiology

遗传和分子流行病学



Utrecht University

Clinical Applications of Epidemiology

流行病学的临床应用



Karolinska Institutet

Mendelian Randomization in Epidemiological Study Design and Analysis
流行病学研究设计与分析中的孟德尔随机化



Nutritional Epidemiology

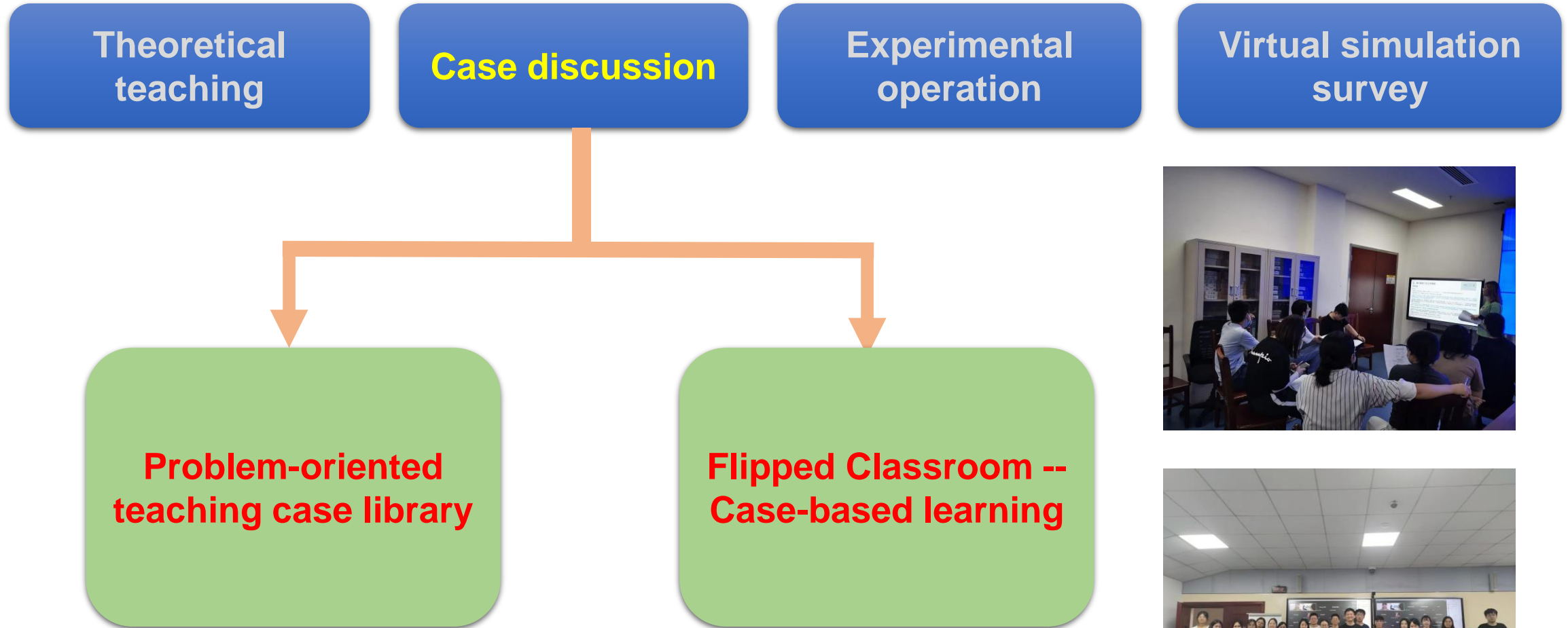
营养流行病学



Scientific writing and presentation

医学论文写作

Diverse teaching forms



Diverse teaching forms

Theoretical
teaching

Case discussion

Experimental
operation

Virtual simulation
survey



Environmental snail detection to assess schistosomiasis risk

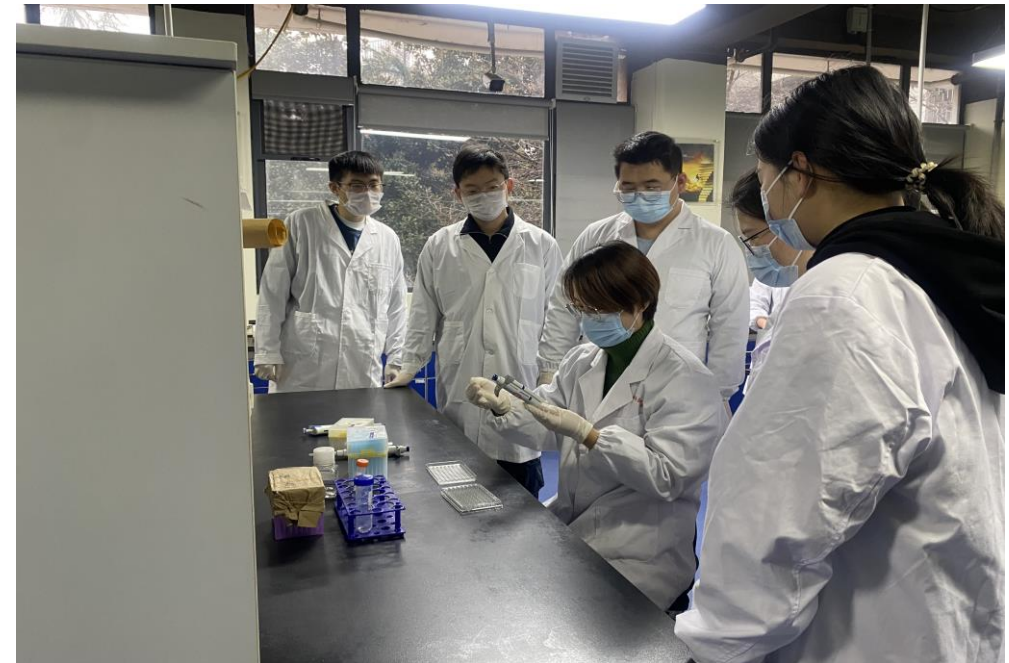
Diverse teaching forms

Theoretical
teaching

Case discussion

Experimental
operation

Virtual simulation
survey



Diverse teaching forms

Theoretical
teaching

Case discussion

Experimental
operation

Virtual simulation
survey



Community chronic disease survey and risk assessment

Diverse teaching forms

Theoretical
teaching

Case discussion

Experimental
operation

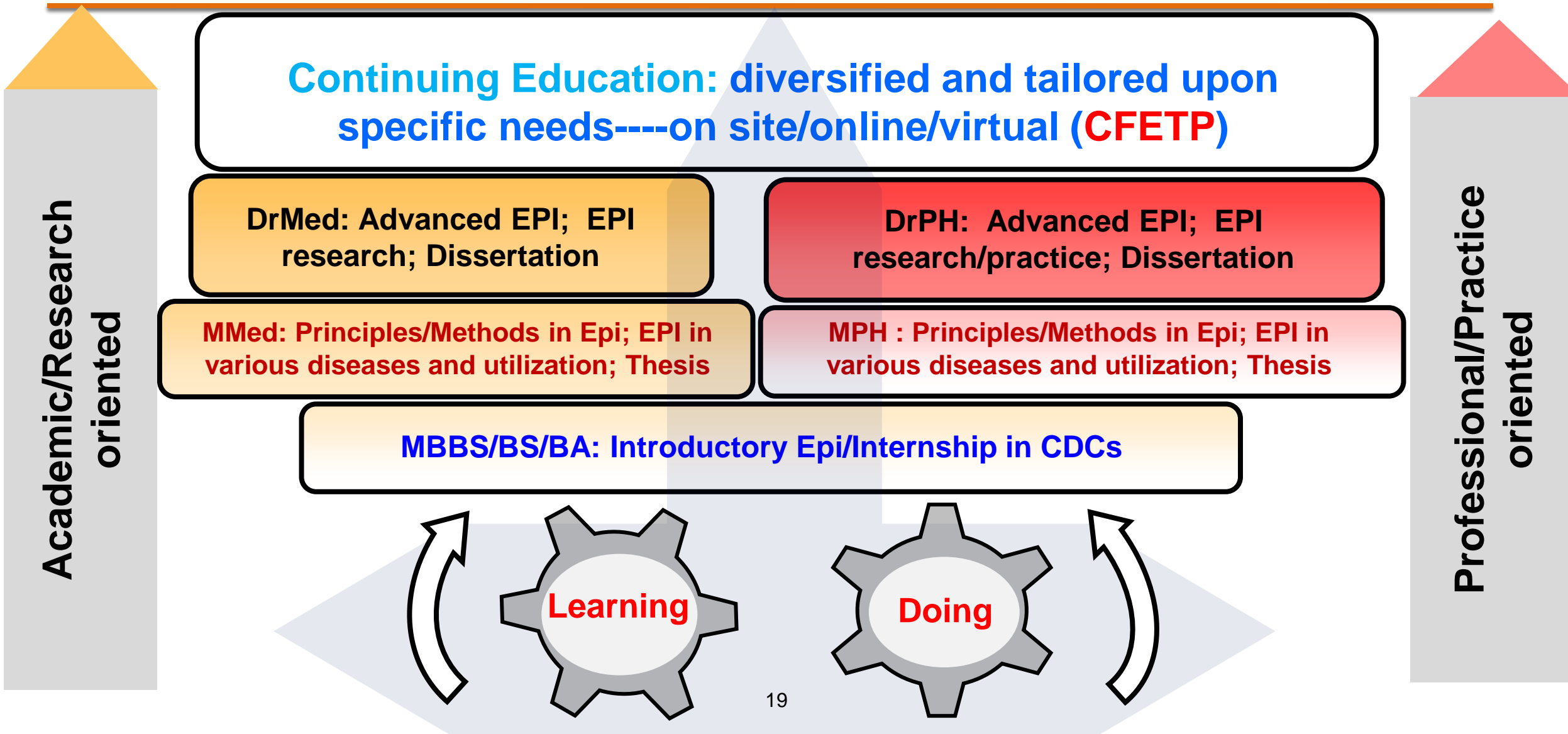
Virtual simulation
survey

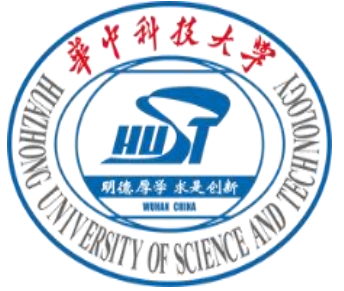


2. 注册登录界面



Teaching Epidemiology for Multilevel Education Programs





Thank you

