

Curriculum in International Medical University 國際醫學大學的教育課程



International Medical University

Medical Education & Research Unit

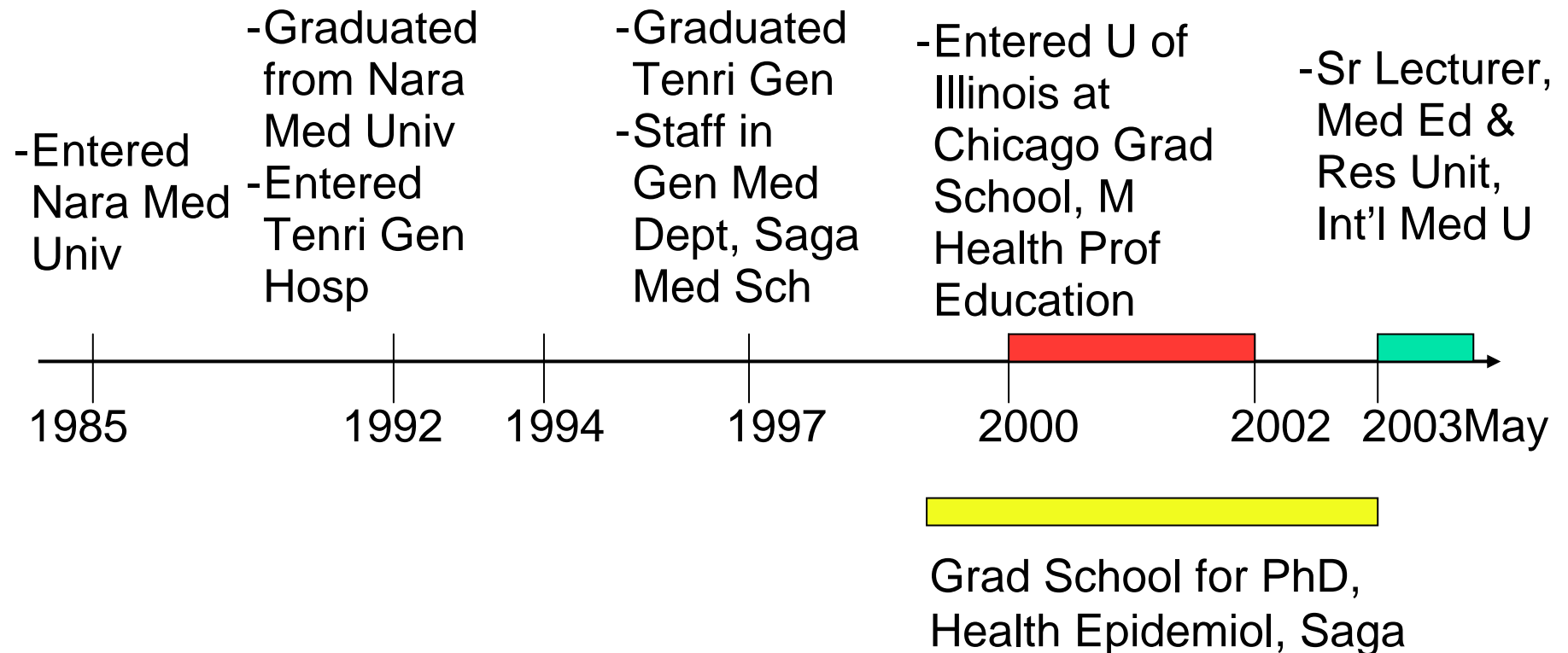
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Personal History





Today's Topics

- Medical education: New discipline or job in Asia?
醫學教育：新學問領域,新職業在亞洲？
- Why Malaysia?
何故馬來西亞？
- Curriculum in IMU
國際醫學大學的教育課程



Medical educ: New discipline?

- Many societies, associations
 - AAMC (Association of American Medical Colleges)
 - ASME (Association for the Study of Medical Education)
 - WFME (World Federation for Medical Education)
 - AMEE (Association of Medical Education in Europe)
 - Ottawa Conference
 - ...



Medical educ. New discipline? (2)

- Many specialized journals
 - Academic Medicine (AAMC)
 - Medical Education (ASME, WFME)
 - Medical Teacher (AMEE)
 - Teaching and Learning in Medicine
 - The Journal of Continuing Education in the Health Professions
 - Evaluation and the Health Professions
 - Education for Health
 - ...



Medical educ. New discipline? (3)

- Graduate programs in Med Educ
 - University of Illinois at Chicago (USA)
 - University of Dundee (UK)
 - University of Maastricht (Netherlands)
 - University of Southern California (USA)
 - University of Wales (UK)
 - University of Berne (Switzerland)
 - ...

Refer to “Resources for Learners of Med Educ
<http://edu-med.umin.ac.jp>



Emerging Job in Asia 新職業在亞洲

- Medical education should be renovated
醫學教育要革新
 - Needs from patients and society
患者·社会的要求
 - Needs from medical students
醫學生的要求
 - Change in educational perspectives (Emphasis on adult learning, skill training, EBM)
教育展望的變化
(成人學習理論, 實技訓練, 根據基準的醫療)



Emerging Job in Asia (2)

- Medical schools: difficult to change

醫學校：變化困難

- Weak incentives for education compared to research and clinical work
弱誘因為教育如果比較研究及臨牀業務
- Teachers tend to teach the way they were taught



Emerging Job in Asia (3)

- What happened in Japan

出來事在日本

- Change in curricular framework
課程骨骼的變化
- Change in assessment tools
評估手段的變化



Emerging Job in Asia (4)

- Major trends of medical education
醫學教育的流行
 - Clinical skill training: Medical interview using SP, physical examination, etc
臨牀實技訓練：模擬患者用醫療面接，診察技法
 - OSCE 客觀的臨牀能力試驗
 - PBL (problem-based learning)
問題基盤型學習
- Similar trends in Asian countries
在亞州有類似傾向



Emerging Job in Asia (5)

- Job of a medical educator

- 醫學教育者的業務

- Facilitate behavioral change of teachers (faculty development)

- 教員的行動變容促進(教員的開發, 訓練)

- Curriculum development (incl. assessment)

- 課程的開發(含評價)

- Organizational change 組織經營的變化

- Research in medical education

- 醫學教育的研究



Why Malaysia? 何故馬來西亞?

- Job opportunity for MHPE
醫療者教育學修士的職業機會
 - Department or unit of medical education in a medical school 醫學校醫學教育部, 部門
 - Governmental sector 政府的教育關係部門
 - Clinical educator 臨牀教育者
- Experiences of medical education in different countries 在外國醫學教育經驗
- Research opportunity in medical education
醫學教育的研究機會



Why Malaysia? (2)

- Medical educ. in Malaysia in general
在馬來西亞一般的醫學教育
 - Influences by UK 英國的影響
 - 5-year curriculum just after high school
高等學校卒業之直後五年課程
 - Dominated by governmental schools
國立醫學校優勢
 - Many private schools under construction
私立醫學校多數創設中



Why Malaysia? (3)

- International Medical University (IMU)
國際醫學大學 (馬來西亞)
 - Founded in 1992, Private 私立1992年創立
 - Medicine, pharmacology, nursing, etc.
醫學, 藥學, 看護學
 - Partnership with 25 schools in 5 countries
(Australia, Canada, Ireland, UK, USA)
協力關係對23醫學校在五國

Detailed info—<http://www.imu.edu.my>





IMU 國際醫學大學 (馬來西亞)

- 24 Partner medical schools 協力醫學校
 - Malaysia: IMU Clinical school
 - Australia: U Adelaide, U Melbourne, U Newcastle, U Queensland, U Sydney, U Tasmania, U West Australia
 - Canada: U Calgary, Dalhousie U, U West Ontario
 - Ireland: National U Ireland Galway, Trinity Col Dublin,
 - NZ: U Auckland, U Otago
 - UK: U Aberdeen, U Dundee, U Edinburgh, U Glasgow, U Liverpool, U Manchester, Queen's U Belfast, U Southampton
 - USA: Jefferson Medical Col



IMU 國際醫學大學(馬來西亞)(2)

- Advisory bodies

- 顧問的團體

- International consultative council

- 國際的相談評議會

- Academic council

- 學際的評議會

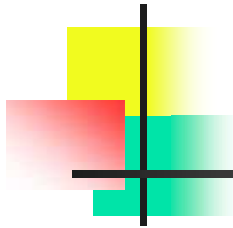
- Professional education advisory committee

- 專門的教育顧問評議會



IMU 國際醫學大學 (馬來西亞) (3)

- Two student intake per year
半年每學生入學制度
- 180 students per intake 入學當180名
- Student-faculty ratio=10:1 學生教員比
- Academic language: English 英語教育
- Campus: Building of old shopping mall
大學旧的商業中心建物 (無大學病院)
- Clinical skill unit, Medical museum
臨牀技能教育室, 醫學博物館 (無解剖實習)



CSU



Museum





IMU 國際醫學大學(馬來西亞)(4)

- Framework of curriculum 課程的骨骼
 - Phase 1--Preclinical: 2.5 years
Learned in Malaysia
臨牀前教育二年半, 在馬來西亞
 - Phase 2--Clinical: 2-3 years
Learned in any partner medical schools
臨牀教育二, 三年, 在協力醫學校
 - Certificate offered from partner med schools
協力醫學校供与卒業証書



IMU Curriculum

- 10 T's principles
 - Transferability of learning
 - Training for lifelong learning
 - Tracked core and selectives
 - Transcultural training
 - Traditional and innovative methods
 - Task-based learning
 - Team-based problem solving
 - Teacher-facilitated learning
 - Technology-based learning
 - Target “assessment-to-a standard”



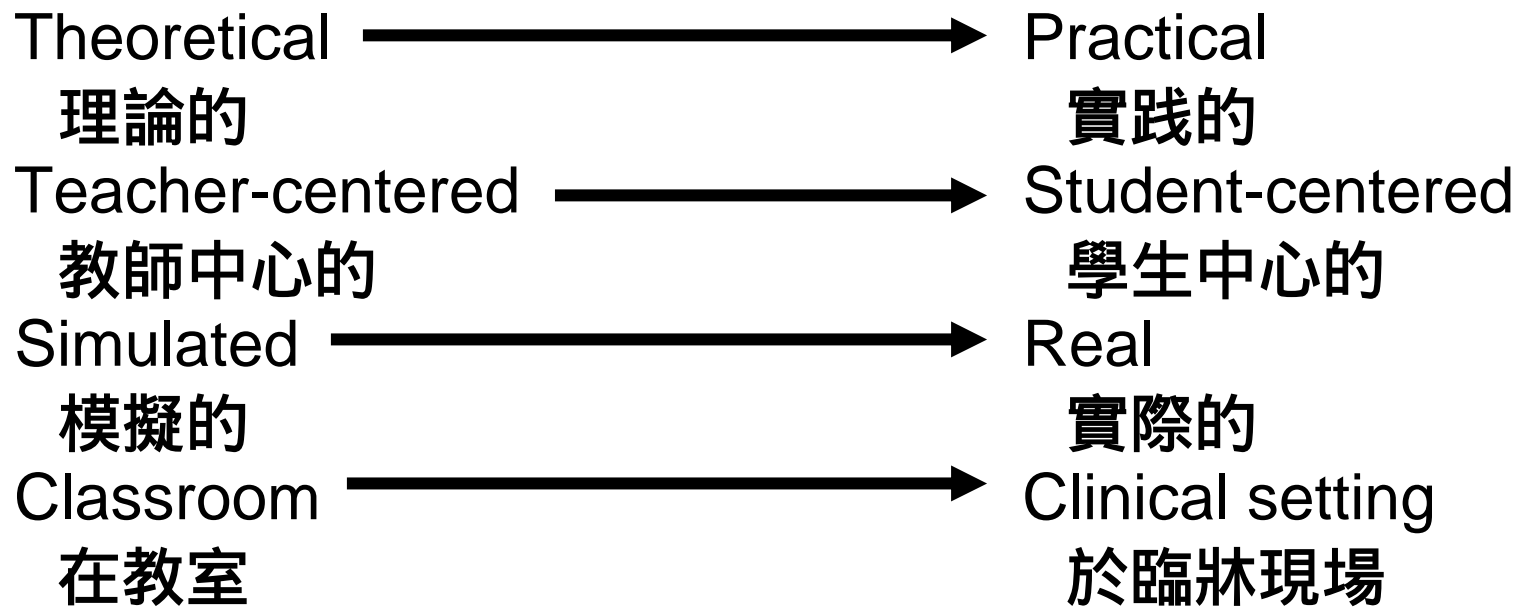
IMU Curriculum (2)

- Old 8 Outcomes (General objectives, Goals)
 - Application of basic science in the practice of medicine
 - Diagnosis, management and prevention
 - Problem solving
 - The family and community contexts of health care
 - Self-awareness, self-care personal growth & life-long learning
 - Moral reasoning and Medical ethics
 - Use of Technology
 - Critical appraisal



IMU Curriculum (3)

- Educational continuum 教育的連續性





IMU Curriculum Phase 1

■ Phase 1: Preclinical curriculum

進級試驗 1

Semester 1 醫學入門1(16週)

選扨課程, 開業医實習 1

Semester 2 醫學入門2(12週)

心血管系(5週)

進級試驗 2

Semester 3 呼吸器系(4週) 血液系(4週) 消化器系(6週)

選扨課程, 開業医實習 2

Semester 4 腎泌尿器系(4週) 生殖系(5週) 內分泌系(4週)

進級試驗 3

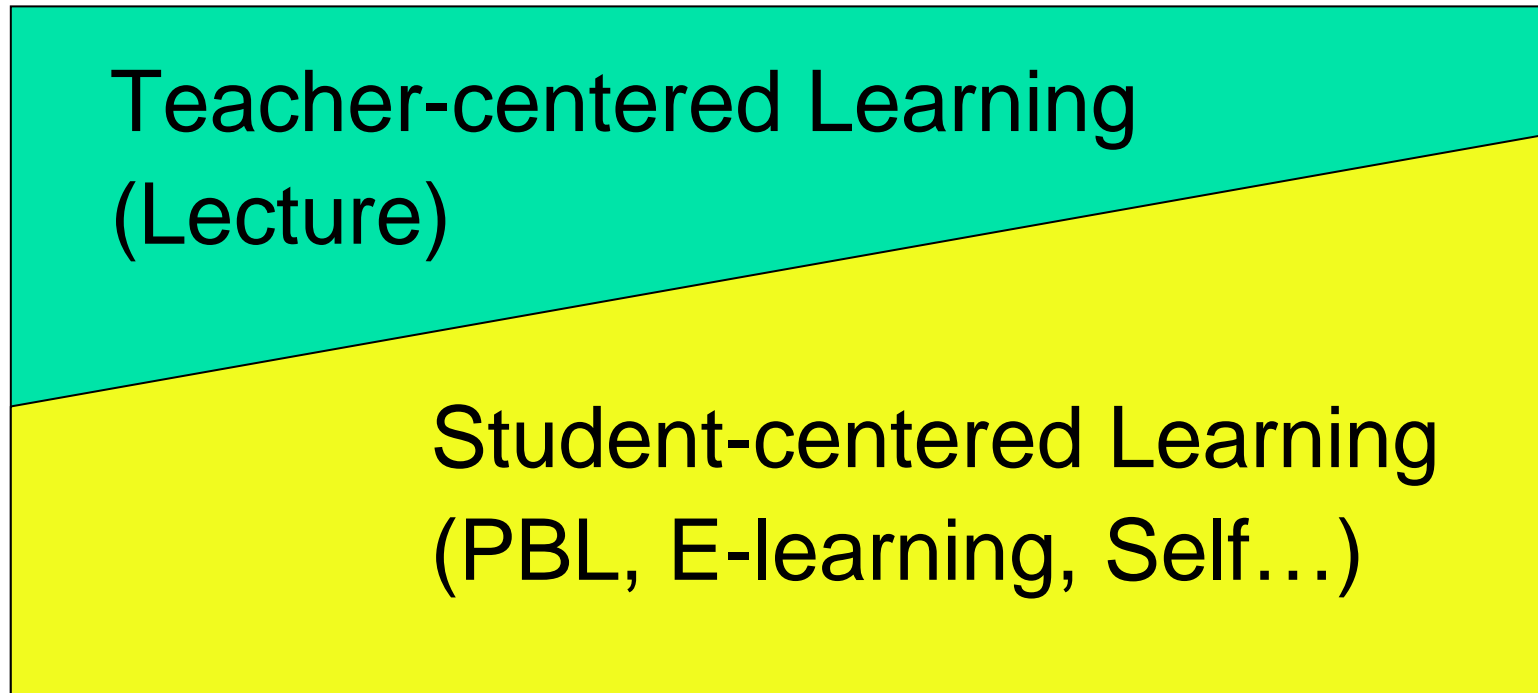
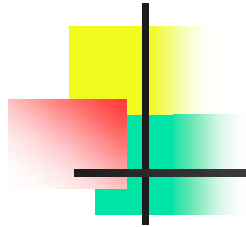
Semester 5 神經系(6週) 地域保健(3週) 筋骨路系(4週)



IMU Curriculum Phase 1 (2)

- Typical weekly Schedule 典型的週間予定

Mon	Tue	Wed	Thu	Fri
Lecture (1hr)	Lecture	Lecture	Lecture	Lecture
PBL (0.5-2hr)			PBL	
	CSU (2hr)		Hosp visit (1/2 day)	
				Lecture
Lecture				



第一半期

第二半期

第三半期

第四半期

第五半期



IMU Curriculum Phase 1 (3)

- Body-system-based curriculum
身體系統基盤的教育課程
 - Problem-based Learning + Lecture
問題基盤型學習講義複合
 - SP use in each body system course
標準模擬患者利用在每身體系統課程
 - Hospital visit
病院訪問



IMU Curriculum Phase 1 (4)

- Experiences in broad aspects

広側面経験

- General practitioner visit
一般開業醫師訪問
- Public health sector visit
公衆衛生関連部門訪問



Phase 1 Assessment 評估

- End of system assessment
臟器系統修了時評估
 - Multiple choice questions 多肢選擇式問題
- End of semester assessment 学期末評估
 - Short answer questions 短解答筆記試驗
 - OSPE (Objective structured practical examination)
客觀的系統的實技試驗
 - OSCE 客觀的系統的臨牀試驗



Phase 1 Assessment (2)

- Pass/Fail standard 通過不通過標準
 - MCQ + SAQ + OSPE + OSCE > 65%
- Emerged problem: Low mark in OSCE should be saved by high mark in SAQ?
短解答筆記試驗高得点補填可也OSCE的低得点？
 - Exp) SAQ > 65% and OSCE > 65%?



IMU Curriculum Phase 2

- Phase 2: Clinical teaching 臨牀教育
- IMU clinical school IMU臨牀学校
 - Seremban: 1hr drive from main campus
一時間從主大学
 - Next to government hospital (800 beds)
隣接国立病院



IMU Curriculum Phase 2 (2)

Semester 6

內科 外科 小兒科 家庭醫學

OSCE1

Semester 7

產婦人科 整形外科 精神科

Semester 8

家庭醫學 眼科 耳鼻喉科 皮膚科 臨牀病理

OSCE2

Semester 9

產婦人科 外科 內科 小兒科 麻醉科 放射線科

Semester 10

內科 外科 小兒科 產婦人科 精神科 整形外科



IMU Curriculum Phase 2 (3)

- Task-based learning 課題基盤型学習
 - Integrated teaching after clinical clerkship is introduced
 - Clinical tasks become learning issues

Pain

Pain in the leg on walking

Acute abdominal pain

Loin pain and dysuria

Joint pain

Back and neck pain

Indigestion

Headache

Cancer pain

Earache



Phase 2 Assessment

- OSCE (16 cases—8 short, 8 long): 50%
- OSPE (X-ray, lab test, etc.): 10%
- MEQ (Modified essay question): 20%
- In Course Assessment: 20%



Phase 2 Assessment (2)

- OSCE: Quality assurance for reliability
 - Example from semester 7 OSCE
 - Generalizability index: 0.72
 - Cronbach's alpha coefficient: 0.67
- OSCE: Standard setting
 - Previously 15 point

	Est	95% CI		90% CI	
		Upper	Lower	Upper	Lower
Angoff I	16.38	18.78	13.97	18.33	14.43
Angoff II	16.81	18.91	14.72	18.51	15.12
Borderline	16.02	16.73	15.30	16.62	15.42



Outcome-based Education

- Connect outcomes to assessment tools
 - Medical knowledge: MCQs, Oral exam
 - Patient care, Communication skill: Patient satisfaction questionnaire, OSCE
 - Professionalism, Practice-based learning, System-based practice: ??

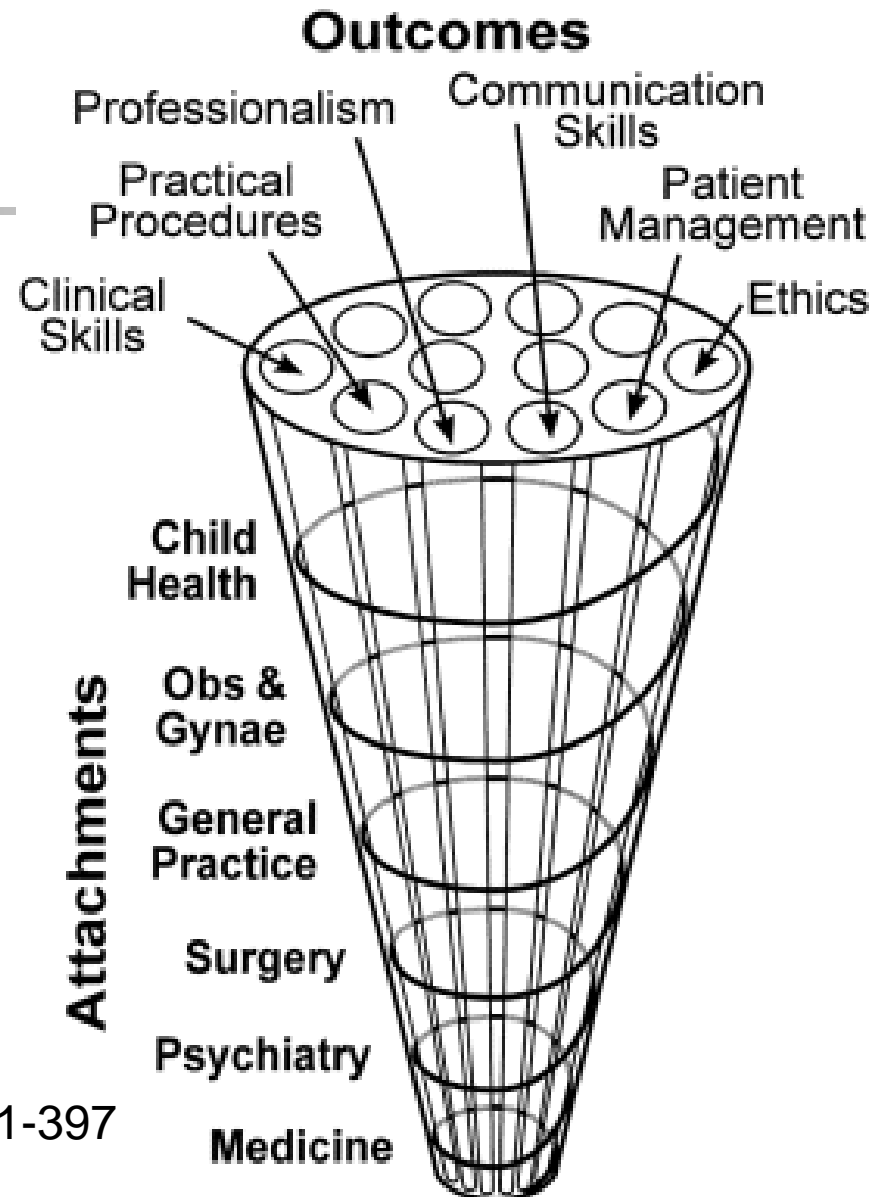
Suggested assessment tools, yet difficult...

<http://www.acgme.org/outcome/assess/assHome.asp>

IMU Curriculum

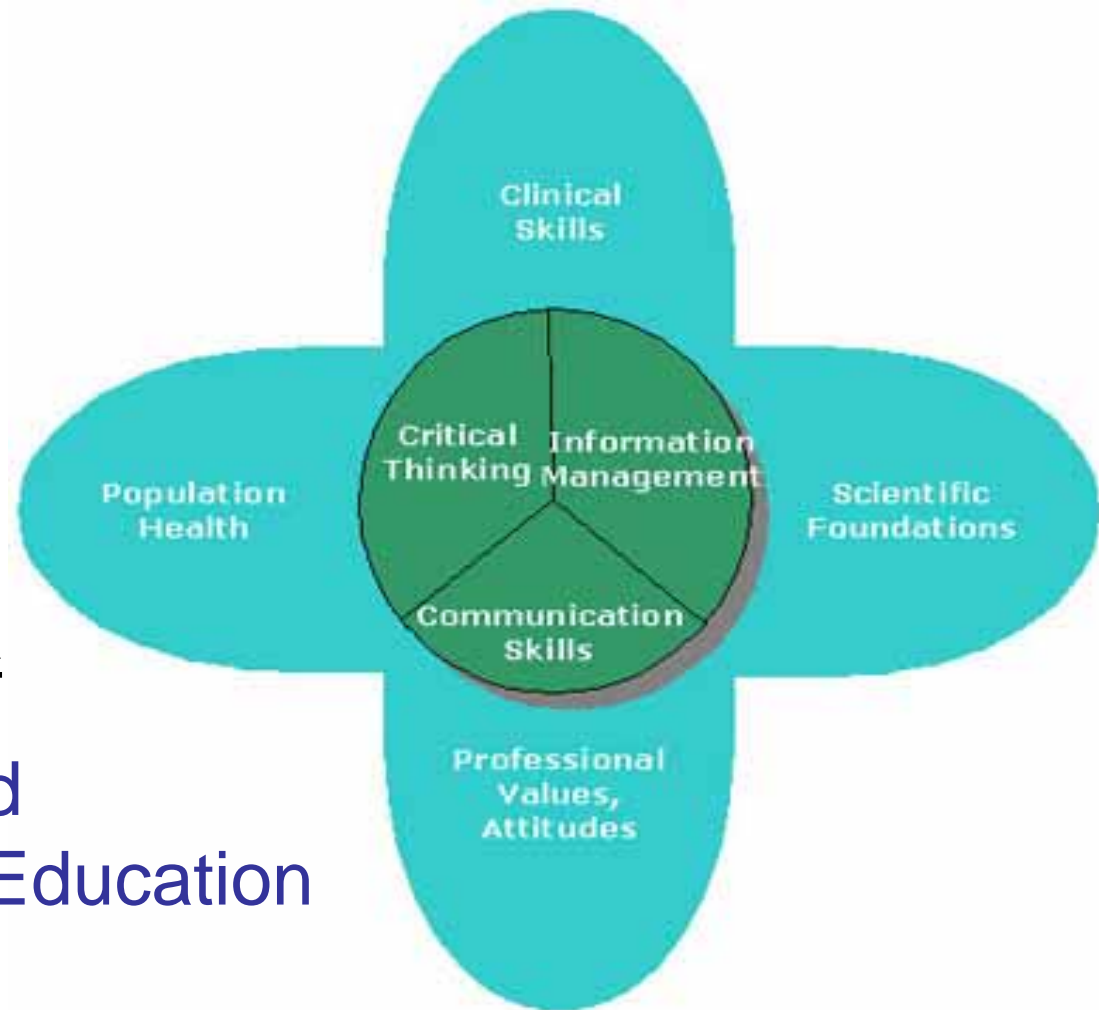
- Spiral curriculum 螺旋型教育課程
 - Iterative revisiting of topics 教育內容反復
 - Balance among knowledge, attitudes, skills 知識, 態度, 技術的均衡

(from Harden, Med Educ 2000;34:391-397)



Curricular revision 課程變革

7 Outcome
Domains of
Institute for
International
Medical
Education (IIME)
國際醫學教育研究所
Movement toward
Outcome-based Education





Curricular revision (2)

General Competencies (1999, ACGME)

- **Patient Care** 美國卒後研修委員會
- **Medical Knowledge**
- **Practice-Based Learning and Improvement** that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, and improvements in patient care
- **Interpersonal and Communication Skills**
- **Professionalism**
- **Systems-Based Practice**, as manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value



Summary

- Medical educator
- Curriculum of IMU
- Outcome-based curriculum & education