Reforming the curriculum and the culture at one US Medical School:

Philosophical Foundations, Logistical Considerations, and Educational Outcomes

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Learning Goals

- **Become familiar with traditional medical school curricula and structure** 伝統的医科大学のカリキュラムと組織について知る
- **List challenges to overcome in promoting institutional change**
  組織改革を進める際に克服すべき課題を理解する
- **Compare and contrast the MUSC experience with plans at U. Tokyo**
  MUSCの経験と東大の計画を比較し、対比を試みる

Structure of Talk

- **History of the Medical University of South Carolina**
  サウスカロライナ医科大学の歴史
  - **Traditional systems and curriculum**
    伝統的な教育システムとカリキュラム
  - **Evolution of change** 変革の展開
  - **Step-wise progression to culture and curricular reform** 文化とカリキュラムの段階的な改革
- **Educational outcomes/innovations**
  教育のアウトカムあるいは変革

Setting

Early Start in Medical Education

- Chartered by South Carolina legislature Dec. 20, 1823
  サウスカロライナ州議会で承認された（1823年12月20日）
- Tenth Medical School in US
  米国で10番目の医科大学
- First Medical School in the “South”
  米国南部で最初の医科大学
- Originally had 7 faculty members and 30 students
  最初は教官7人、学生30人でスタート

Golden Period – 1824-1860

黄金期－ 1824年～1860年

- By 1832, there were 109 medical students
  1832年までには、学生数109
- Graduating class was 35 第一期生 35名
- By 1860, the college had 248 students and was the fifth largest student body in the country 1860年、学生248人。これは当時の全米の医科大学の中で5番目に多い学生数だった。
- Fort Sumter and the Civil War
  サムター要塞と南北戦争

Civil War 1861-1865

南北戦争 1861～1865年

Post-Civil War Period

南北戦争 終結後

- Most buildings were destroyed but by November 1865, classes resumed 建物がほとんど破壊されたにもかかわらず、1865年には学校を再開
- In 1872, when students had no money, all fees were suspended – faculty and trustees assumed financial responsibility
  1872年、学生にはお金がなく授業料の支払いが中断。教員も理事も財政面の責任を負った。
- In 1886, Charleston earthquake
  1886年、チャールストン地震

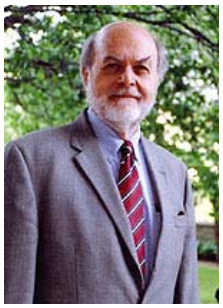
Early 1900s
1900年代初期

- **Flexner Report – 1910**
  フレクスナー・レポート（1910年）の記載：
  "The College, despite its tradition and dignity, was sorely lacking in facilities, faculty, equipment and money. . . . believing it unlikely that that Charleston's Medical College could or would survive."
  「この大学は、伝統と威信はあったとしても、教育施設、教員、備品、そして資金がことごとく欠乏していた。チャールストンの医科大学がこの先、生き残るのは困難と思われる」

Response to Flexner Report
フレクスナー・レポートに対して

- 1913 – South Carolina General Assembly approved State ownership of the College (for $10,000) 1913年サウスカロライナ議会が医科大学を州立と承認
- City of Charleston raised $75,000 and built a new building チャールストン市が7万5千ドルを投じ新校舎建設
- In 1955, Medical University Hospital constructed
  1955年、大学病院建設
- In 1980s, Dr. James Edwards served as president
  1980年代、ジェームズ・エドワーズが学長に。

Two Important Leaders
重要なリーダー2人



Recruitment to MUSC
MUSCへの抜擢

- July 2004 – Wong recruited to MUSC
  2004年7月 - ウォン教授　MUSCへ
- Initial Goal: Successful LCME site visit
  当初の目標：LCME（医学教育連絡協議会）の現場視察で好評価を得ること
- Long-range goal: Coordinate the continuum of medical education and up-date undergraduate medical education
  長期目標：医学教育の連続性を整え、卒前教育を刷新する

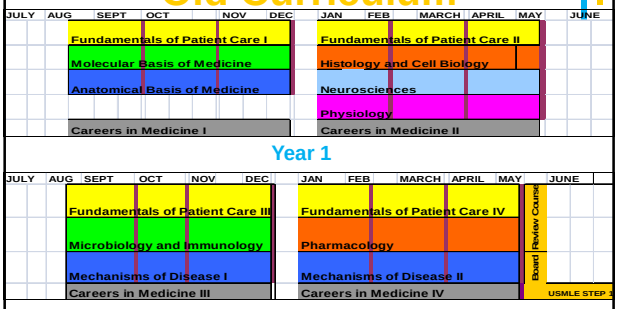
LCME Accreditation
LCMEの認証

- **Liaison Committee on Medical Education (LCME)** 医学教育連絡協議会
  - Comprised of Secretaries of the American Medical Association (AMA) and the Association of American Medical Colleges (AAMC)
    AMA（米国医師会）とAAMC（米国医科大学協会）の幹事で構成
  - Responsible for accrediting all US and Canadian Allopathic Medical Schools
    米国とカナダの医科大学の認証に責任を持つ

LCME Accreditation Cycle
LCMEの認証周期

- Full-accreditation = 8-years
  全般的な認証＝8年間
- Site-visit: 3-day event with 5 visitors
  現場視察：5人の視察者×3日間
- Review all operations of the medical school (program of study, facilities, operations, finances, students, faculty)
  医科大学のあり方すべてを精査（カリキュラム、設備、運営、財政・経営、学生、教員）
- Standards established　基準の確立
- Database　データベース
- Self-study (performed by institution)　自己点検評価

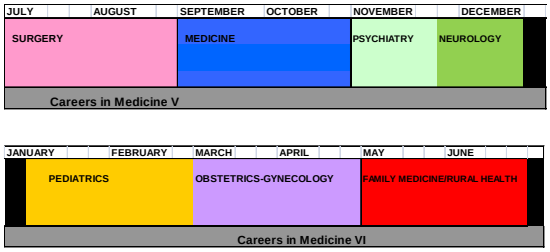
Old Curriculum



Year 1

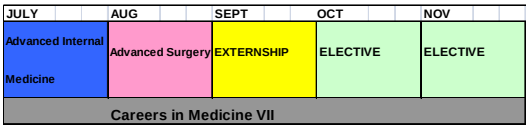
Year 2

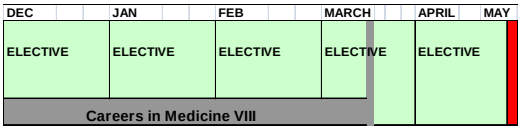
Old Curriculum



Year 3

Old Curriculum



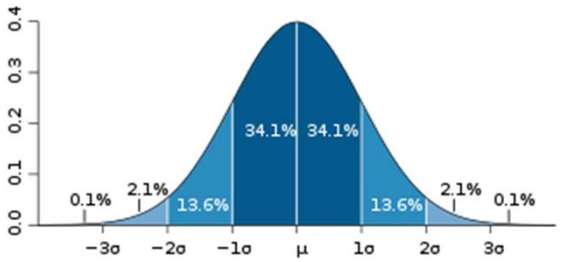


Year 4

Old grading system

Letter Grade	Grade Point	Percentage
A	4.0	94 - 100%
A-	3.7	90 - 93%
B+	3.3	87 - 89%
B	3.0	83 - 86%
B-	2.7	80 - 83%
C+	2.3	77 - 79%
C	2.0	73 - 76%
C-	1.7	70 - 72%
D+	1.3	67 - 79%
D	1.0	60 - 66%
F	0.0	0 - 59%

Normal Bell-shaped Distribution



Ranking the Med Students

医学生のランキング

- 135 students in 2004 2004年 135名の学生
- Determined class rank (from #1 to # 135) 同学年で1番から135番まで席次をつける
- Clinical Clerkships grades were also graded on a 4.0 scale
  臨床クラークシップの評価も、4段階で付ける

LCME Site Visit
LCMEの現場視察

- January 2005 – LCME Site-visit
  2005年1月に実施
- April 2005 – Strategic planning event
  2005年4月　戦略的計画
  - 70 faculty, administrators, students　教員70名、事務方、学生
  - Reviewed self-study　自己点検評価の見直し
  - Created vision/mission statements and goals
    ビジョンと使命と目標の明確化
- June 2005 – 8-year accreditation granted
  2005年6月－　8年間の認証に合格
- Work begins on problems identified in the self-study　自己点検で明らかになった問題への取り組み開始

Strategic Planning Logistics
戦略的な計画策定の方略

- One full day event – off campus
  一日がかりの学外行事
- All department chairpersons, Deans, Administrators, Course Directors, Clerkship directors, and major faculty teachers invited
  教授会議長、学部長、事務官、カリキュラム管理者、実習管理者、そして主要な教員が招かれた
- Had student representation from all 4 years of medical school　全4学年から学生の代表も参加
- Reviewed the self-study – tried to reach consensus on where the school should go next to improve
  自己点検の見直し－　学校改善への意見の統一を試みた

Strategic Plan　戦略的計画

- VISION STATEMENT: ***To be a leader in medical education and to enhance our influence nationally and internationally***
  ビジョンの宣言：医学教育におけるリーダーを目指すこと。米国で、そして海外で影響力を高めること
- MISSION STATEMENT: ***To prepare our students to be outstanding physicians and leaders in disciplines of their choice***
  我々の学生たちが各自の選んだ分野で傑出した医師やリーダーに育つよう、道筋をつけること

Two Curricular Goals
カリキュラムの目標

1. ***Refine, Refocus and Enhance our Curriculum Content***
   カリキュラム内容の精選、再焦点化、強化
   - Introduce and integrate appropriate Clinical Science Content earlier
     適切な臨床教育内容の早期導入と統合
   - Achieve core competencies with a broad-based plan of study　幅広い教育計画によりコアコンピテンシーを達成
   - Design flexibility in the plan of study recognizing that “one size does not fit all”
     「1つで全てはカバーできない」ことを悟り、教育計画に弾力性を持たせる

Two Curricular Goals cont.
2つのカリキュラム目標（つづき）

2. ***Identify Current and Develop Novel and Effective Teaching and Evaluation Methodologies***
   教育と評価の方法論を現時点で同定し、新たに効果的な方法論を構築する
   - Produce graduates that are adept self- directed learners and critical thinkers
     自己決定学習、批判的思考に熟達した卒業生を産み出す
   - Evaluate and promote students by evidence of achievement and competence rather than merely time spent in an activity　活動時間よりも達成や能力の根拠を評価、重視
   - Utilize technology to increase effectiveness of teaching and evaluation　教育と評価の効果を増すためにテクノロジーを利用
   - Utilize a variety of teaching and evaluation methodologies to accommodate different learning styles
     様々な学習スタイルを許容するような多様な教育と評価の方法の利用

Philosophical Foundations
行動指針の基本

- **Collaborate, don’t compete**　協働し、競わない
- **Get beyond the “what”**　Whatの先を考える
  - **How do we teach and how should we be teaching?**
    いまどのように教えているか、今後はどんな指導法が考えられるか
  - **What do we teach?**　何を教えるか
  - **When do we teach it?**　いつ教えるか

MUSC
COLLEGE of MEDICINE

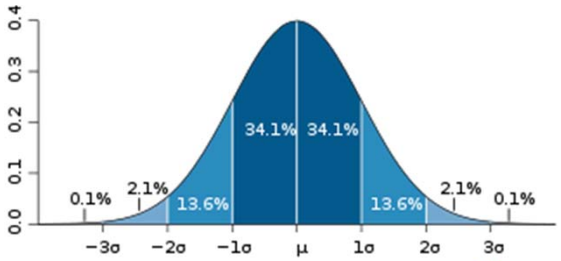
Schadenfreude

Collaborate, don't compete

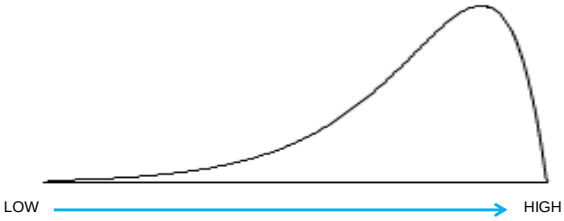
Collaboration

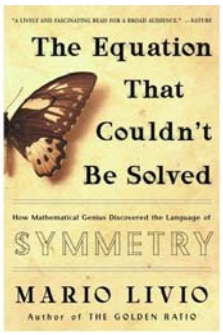
Get Beyond the "What"

Grading on a Curve



Medical Student Test score distribution テスト得点分布図





$ax^5 + bx^4 + cx^3 + dx^2 + ex + f = 0$

"Why don't the examiners pose questions to candidates other than in a twisted manner? It seems that they fear being understood by those they are interrogating; what is the origin of this deplorable habit of complicating the questions with artificial difficulties?"

「試験官はなぜ受験者にひねった質問以外のものを出題しないのか。まるで問題を出す相手に理解されるのを恐れてでもいるかのようだ。問題を人工的に難しく複雑にする、こうした非難すべき傾向の根源は何だろうか。」

Evariste Galois

January 2, 1831 in *Gazette des ecoles*

"When will the poor youngsters be given some time to reflect on this accumulation of knowledge . . .

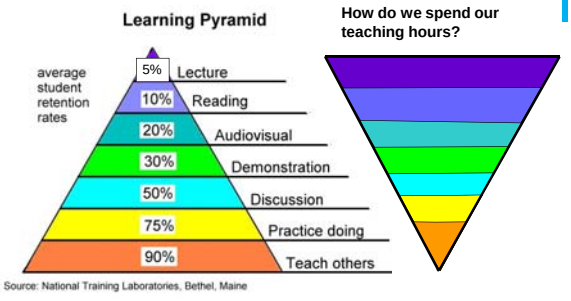
. . . Students are less interested in learning than in passing their exams."

「気の毒な若い学生たちには蓄えた知識を見直す時間が与えられるだろうか。彼らは、試験の合格には関心があるが、学ぶことへの関心が低い」

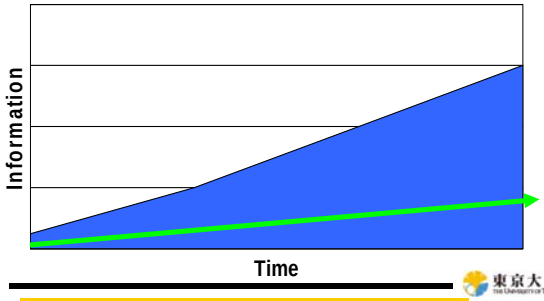
Evariste Galois

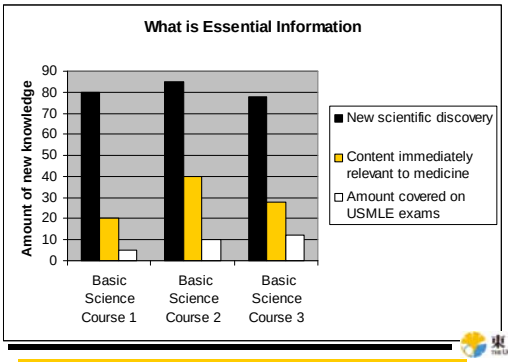
January 2, 1831 in *Gazette des ecoles*

How are we teaching?

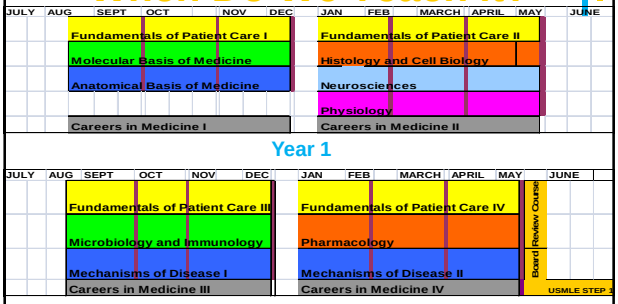


What is the essential information ?





When Do We Teach it?



"Undergraduate" Model
卒前教育モデル

- Undergraduate courses by design are "self-contained" デザイン上の学部教育のコースは「自己完結型」
- Parallel courses provide their specific content without regard to other courses
  並行するコースは他のコースに関係なくそれら特有の内容を提供する
- Evaluation system encourages cycle studying
  評価システムが各コースを循環する学習を奨励する
- Students are picking courses from a menu of choices in order to fulfill a major
  学生は自分の専攻での必要を満たすべく選択肢メニューからコースを選ぶ
- The "101', "201", "301" model does not translate
  101、201、301のモデルは置き換わらない

Challenges to Medical Education
医学教育の課題

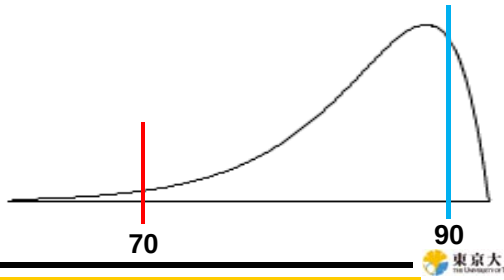
- How do we ensure that Medical Student education is relevant? (combat information overload)
  卒前教育が適切であると、我々はどうやって保証する？(過重な知識との闘い)
- How do we most effectively and efficiently use the time of students and faculty members?
  もっとも効果的・効率的に学生と教員の時間を使うにはどうするか？
- How can we best assure learning? (de-emphasize rote memorization and encourage problem-solving) 我々はどうやって学習の保証を最大にできる？(繰り返しの暗記よりも問題解決力を重視)
- How do we promote collaboration and instill a sense of professionalism in our learners?
  学習者に協働を促し、プロフェッショナリズムの感覚を教え込むにはどうするか

Eliminated 4.0 Grading scale

- Created Pass-Fail system (honors)
  無理矢理作った合否や優等生のシステム
- Incorporated holistic evaluation of student performance 学生の全般的評価に統合
- Created academic and behavioral standards rather than comparisons
  学生間の比較より、学問や行動の標準を創り出す
- Created more opportunities for evaluation (including peer evaluation)
  より評価の機会を増やす（相互評価を含む）

Pass-Fail System

GPAシステムから、より妥当性の高い評価へ



US Medical Schools

- 93 schools [60%] (P-F or H-P-F)
- 16 schools [10%] (H-HP-P-F)
- 12 schools [7.8%] (H-HP-P-LP-F)
- 28 schools [18%] (A-B-C-D-F)

P: Pass 合格	HP: High Pass 高得点合格
F: Fail 不合格	LP: Low Pass 低得点合格
H: Honor 優等	A~D & F: Grade Point Averageシステム

Curricular Reformulation

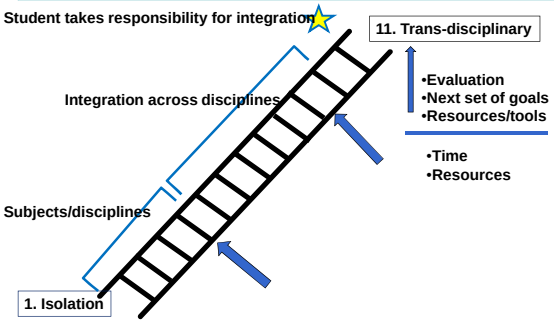
- Integration 統合
- What is important/what is not
  重要なこととそうでないこと
- Alter teaching methodologies
  教育方法の変更
- Make better use of teachers' and students' time 教員と学生の時間利用の効率化
- Bring the clinical into the basic science 基礎医学に臨床の文脈を入れていく

Clinical medicine is integrative

- Patients do not present with "physiology" problems or "biochemistry" problems
  患者は生理学や生化学の問題点を示さない
- Memorizing "facts" as a main strategy for medical education is doomed to fail
  医学教育の主たる方略として事実を記憶することは、失敗につながる
- USMLE questions, by design, incorporate organ systems and bodily processes
  米国国家試験（USMLE）は、形式上臓器系統システムに紐付けられている
- Teaching by scientific discipline increases the possibility of esoteric details and marginally relevant content 領域毎の教育は重箱の隅につながりやすい

The Integration Ladder: A tool for curriculum planning and evaluation.

(Ronald Harden, Medical Education 2000, 34:551-557)



"Horizontal" Curricular Structure

横断的なカリキュラムの構成

- ***Four themes were developed*** *4つのテーマを決定*
  - Integrate subject matter formerly identified as courses
    以前コースとして認識されていた内容を統合
  - Fundamentals of Patient Care focused on professional development and behavior
    医師としての能力、行動に焦点を当てた患者ケアの基本
    - **Focus on physician development and wellness**
      医師の発達と健康
    - **Focus on patient care skills in the context of diversity, cultural awareness, and professional development**
      多様性、文化への認識、医師としての発達というコンテクストでの患者ケアスキル

Year 1

AUGUST → MAY

STRUCTURE & FUNCTION	**Anatomy (gross, histology, embryology) –Physiology-Cell Biology**
HOMEOSTASIS & REGULATION	**Neuroscience – Endocrinology - Genetics**
Molecules and Energy	**Biochemistry – Nutrition**
Fundamentals of Patient Care	**Patient: Interviewing skills, Physical Diagnosis, Patient Diversity, Behavioral Science, Critical Thinking**
	Physician: Building a Life in Medicine, Wellness, Careers in Medicine, Professional Development

"Vertical" Curricular Structure

縦断的なカリキュラムの構成

- ***7 Blocks were developed*** *7つのブロックを決定*
  - Foundations Block introduces the essential basic science and clinical skills that form the basis for learning within the 6 subsequent systems-based blocks 後の6つの臓器系統別ブロックで学ぶ内容の基礎を形成するような基本的な基礎医学、臨床スキルを導入する基盤ブロック
  - A final Synthesis Block requires students to demonstrate critical thinking skills, effective communication with peers and other professionals, and to assemble resources required for self-directed learning 最後の統合ブロックでは、批判的思考、学生間や他職種とのコミュニケーション、自己決定学習に必要な情報の収集ができることを学生が示す必要がある

Year 1

August → December

Foundations of Biomedical Science **Building blocks Nomenclature**	**Musculoskeletal-Extremities**	Synthesis	**Cardiovascular**	Synthesis	**Respiratory**	Synthesis

Year 1

January → May

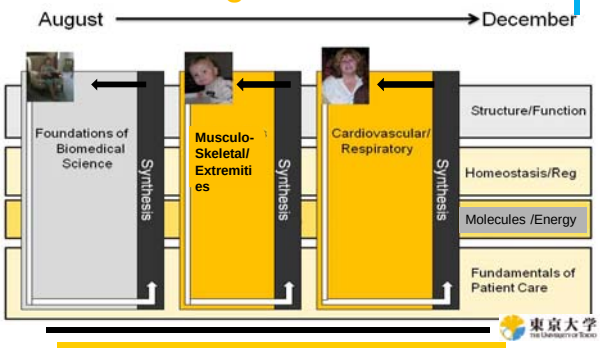
Renal and Gastrointestinal	Synthesis	**Urogenital and Reproductive**	Synthesis	**Cognition and Control**	Synthesis	**Synthesis** **Application of basic science principals to clinical cases** **Transition to disease states**

Patient-Centered Curricular Structure

患者中心のカリキュラムの構成

- ***For each block, the <u>patient</u> is the focal point*** ***各ブロックで患者が焦点となる***
  - Each block introduces the student to a patient
    各ブロックで学生に患者があてがわれる
  - Clinical and basic science topics are connected to the patient throughout the block
    ブロックを通じて臨床、基礎医学のトピックスは患者とつなげられる

The integrated curriculum



Weekly Structure

週間スケジュール

- **Morning lectures 朝の講義**
- **Afternoon small groups 午後の小グループ**
  - **9 to 10 students/2-3 preceptors**
    9~10の学生に2~3人のチューター
  - **Laboratories 実習**
  - **Simulation Center シミュレーションセンター**
  - **Physical Diagnosis 身体診察**
  - **One afternoon designated self-directed study**
    1日の午後は自己学習にあてがわれる

Structure Sample Week

Time	Mon	Tue	Wed	Thur	Fri
Morning	Content Lectures- 3hrs	Content Lectures- 3hrs	Content Lectures-3hrs	Content Lectures- 3hrs	Content Lectures-3 hrs
Lunch					
1:00 – 2:00 2:00 – 3:00 3:00 – 4:00 4:00 – 5:00	A- Small Group Interviewing skills B- Self-directed Study C- Self-directed Study D- Simulation Skills- Cardiac Exam	A – Anatomy Lab B – Small Group Interviewing skills C- Simulation Skills – Cardiac Exam D – Anatomy Lab	A – Self-directed study B – Simulation Skills Cardiac Exam C- Small Group Interviewing skills D- Self-directed study	A – Simulation Skills- Cardiac Exam B- Anatomy Lab C- Anatomy lab D – Small Group Interviewing skills	All Groups– Anatomy Laboratory Review and Peer Teaching

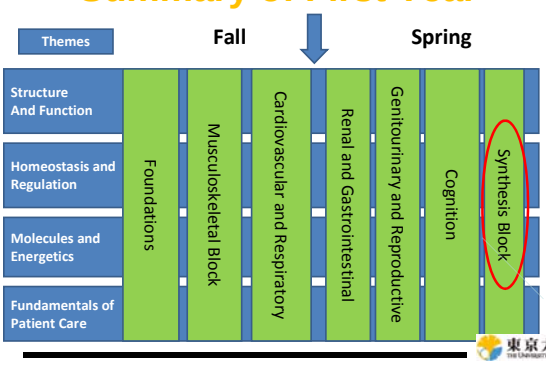
Structure/function | Homeostasis/regulation | Molecules/Energ | Fundamentals

Synthesis Review Block

統合とまとめのブロック

- **Novel approach to 1st year education**
  1年生には新しいアプローチ
- **Final rotation of the year totally devoid of lecture 年間の最後のローテーションは全く講義なし**
  - **Team-based learning チーム基盤型学習**
  - **Self-directed learning 自己決定学習**
  - **Academic poster creation ポスター作り**
  - **Academic oral presentation 口頭発表**
  - **Peer-evaluation of performance 相互評価**

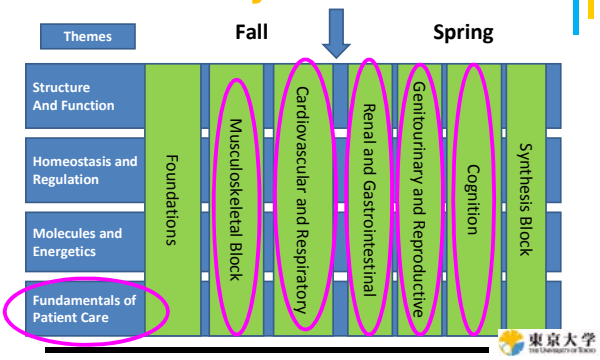
Summary of First Year



Synthesis Block
統合ブロック

- Two-weeks at the end of the year 最後の2週
- First session 第1セッション
  - Patient case presentation 患者事例発表
  - Learning goals/objectives for the entire year are created 年間を通じた学習目標の策定
  - Six Large domains 6つの大きな領域

Summary of First Year



Synthesis Block cont.
統合ブロック(続)

- Two-weeks at the end of the year 最後の2週
- First session 第1セッション
  - Patient case presentation 患者事例発表
  - Learning goals/objectives for the entire year are created 年間を通じた学習目標の策定
  - Six Large domains 6つの大きな領域
    - Sub-divided by three into 18 sub-domains
      18の下位領域にさらに分割

Synthesis Working Groups
統合ワーキンググループ

- Students placed into 18 working groups
  学生を18のワーキンググループに分割
- COM Teams (original learning groups) split up to assure representation in all 6 domains.
  COMチームがグループ別に担当を決め、全6領域の学習内容を相互に説明

MusSkel			CV-Resp			Renal-GI			GU-Repr			Cognit			FPC		
1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3

A-1 through A-5
B-1 through B-5
C-1 through C-5
D-1 through D-5

Synthesis Block Days 1-3
統合ブロック 1~3日目

- Working groups met with list of review goals and objectives ワーキンググループは学習目標リストを見る
- Compiled answers/created explanations for the items 各項目に解答や説明が設けられている
- Created Academic Posters designed to present this information for peers
  この情報を他の学生に発表するために、ポスターを作る

Synthesis Block Day 4
統合ブロック 4日目

- Posters printed ポスターを印刷
- Students prepared oral poster presentations 学生は発表準備
- Became the "peer experts" on that particular content area
  各内容領域で、各自が学生間での専門家になる

Synthesis Block Poster Day

統合ブロック ポスター発表日

- Students and faculty reassembled back into original COM Team Learning Groups
  学生と教員は最初の学習グループで集まる
- Every student orally presented the posters they helped to create to his/her peers
  各学生は他の学生にポスターを口頭発表
- Presentations were peer-evaluated for quality, clarity and content
  発表は質、明確さ、内容に関して相互評価

Schedule for poster day

PM Poster Session										
	FPC A1	FPC A2	FPC A3	FPC B1	FPC B2	FPC B5	FPC C5	FPC D1	FPC D2	FPC D5
1:00 – 1:20	Obj 1	Obj 2	break	Obj 3	Obj 4	break	Obj 5	Obj 6	break	break
1:20 – 1:40	Obj 2	break	Obj 3	Obj 4	break	Obj 5	Obj 6	break	break	Obj 1
1:40 – 2:00	break	Obj 3	Obj 4	break	Obj 5	Obj 6	break	break	Obj 1	Obj 2
2:00 – 2:20	Obj 3	Obj 4	break	Obj 5	Obj 6	break	break	Obj 1	Obj 2	break
2:20 – 2:40	Obj 4	break	Obj 5	Obj 6	break	break	Obj 1	Obj 2	break	Obj 3
2:40 – 3:00	break	Obj 5	Obj 6	break	break	Obj 1	Obj 2	break	Obj 3	Obj 4
3:00 – 3:20	Obj 5	Obj 6	break	break	Obj 1	Obj 2	break	Obj 3	Obj 4	break
3:20 – 3:40	Obj 6	break	break	Obj 1	Obj 2	break	Obj 3	Obj 4	break	Obj 5
3:40 – 4:00	break	break	Obj 1	Obj 2	break	Obj 3	Obj 4	break	Obj 5	Obj 6
4:00 – 4:20	break	Obj 1	Obj 2	break	Obj 3	Obj 4	break	Obj 5	Obj 6	break

Synthesis Block cont.

統合ブロック 続き

- Days 6-8 - Individual student study/review 6~8日目：各学生の学習と振り返り
  - Posters were left up in common area for study use ポスターは公開したまま
- Day 9 - Comprehensive MCQ examination 9日目：包括的MCQ
- Day 10 – Customized MCQ exam from National Board question bank
  10日目：国家試験問題プールからのMCQ

Results

- Knowledge
  - MCQ scores demonstrated good understanding of course material
    MCQスコアではコース内容の理解はよい
  - NBME customized exam correlated
    国家試験用テストの点数とも相関
- Skills
  - Every 1st year student helped to create an academic poster 1年生全員が助け合ってポスター作成
  - Every 1st year student conducted an oral poster presentation 1年生全員が口頭ポスター発表
- Attitudes – Peer teaching/group work
  相互学習やグループワーク

Results

"I really liked working on the posters and creating word documents that the rest of our class would come to rely on for their final exam studies. I think everyone stepped up their game knowing that how well they did their job directly affected their classmates."

「ポスター作りや、他の学生が期末試験に使う文書の作成は、私はとても好きだと感じた。各自がどのぐらいよいものを作れるかがクラスメートに直接影響するということを知り、全員がステップアップできたと思う。

Results

- "The format of the block was brilliant. Group work and presentations were definitely helpful. The amount of time allocated was also very useful to relearn the material thoroughly."
  ブロックのフォーマットは見事だった。グループワークやプレゼンはもちろん有用であった。割り振られた時間の量は、教材について学び直しをするのにとても有用だった。
- "I thought this block helped to bring everything together from over the year. It helped us reflect on all the material that we have learned. The learning objectives were helpful and eased a lot of stress when it came time to prepare for the final exam."
  このブロックは1年を通じたカリキュラム全てをまとめるのに役立つと私は思った。学んだ教材を振り返るのに役立った。教育目標は最終試験の準備時期のストレスを軽減し、便利であった。

Wong JG Med Educ 2012; 46: 1103-1104.

Year 2

AUGUST → JUNE

ABNORMAL STRUCTURE & FUNCTION	Anatomical and Histological Pathology, Pathophysiology, Mechanisms for the Development of Disease
PATHOGENS AND HOST DEFENSES	Immunology, Microbiology, Population Genetics and Epidemiology
PHARMACO-THERAPEUTICS AND NUTRITION	Pharmacology, Non-medication treatments, Nutritional Considerations in Disease States
Fundamentals of Patient Care	Patient: Advanced Interviewing, Physical Diagnosis in Disease, Health Disparities, Introduction to Clinical Ethics
	Physician: Introduction to Clinical Reasoning, Maintaining Wellness, Careers in Medicine, Evidence-Based Medicine

Year 2

August → December

Foundations of Human Disease	Synthesis	Autoimmunity, Hypersensitivity and Neoplasia	Synthesis	Pediatric, Hematologic and Dermatologic Diseases	Synthesis	

Year 2

January → May

Renal and Cardiopulmonary Diseases	Synthesis	Neurologic, Psychiatric and Endocrinological Diseases	Synthesis	Reproductive, Metabolic and Gastrointestinal Diseases	Synthesis	Board Review for USMLE Step 1

Two Curricular Goals

1. Refine, Refocus and Enhance our Curriculum Content カリキュラム内容の精選、再焦点化、強化

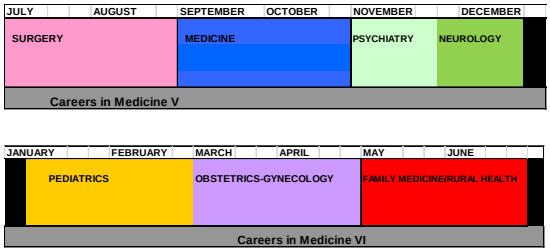
- Introduce and integrate appropriate Clinical Science Content earlier 適切な臨床教育内容の早期導入と統合
- Achieve core competencies with a broad-based plan of study 幅広い教育計画によりコアコンピテンシーを達成
- Design flexibility in the plan of study recognizing that "one size does not fit all"
  「1つで全てはカバーできない」ことを悟り、教育計画に弾力性を持たせる

Two Curricular Goals cont.

2. Identify Current and Develop Novel and Effective Teaching and Evaluation Methodologies
教育と評価の方法論を現時点で同定し、新たに効果的な方法論を構築する

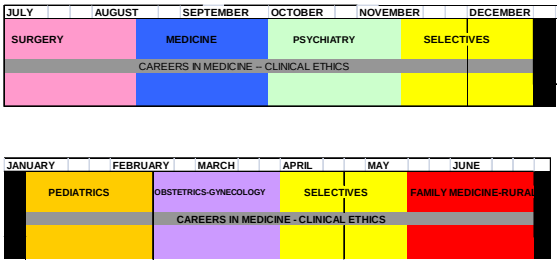
- Produce graduates that are adept self- directed learners and critical thinkers
  自己決定学習、批判的思考に熟達した卒業生を産み出す
- Evaluate and promote students by evidence of achievement and competence rather than merely time spent in an activity　活動時間よりも達成や能力の根拠を評価、重視
- Utilize technology to increase effectiveness of teaching and evaluation　教育と評価の効果を増すためにテクノロジーを利用
- Utilize a variety of teaching and evaluation methodologies to accommodate different learning styles　様々な学習スタイルを許容するような多様な教育と評価の方法の利用

Old Curriculum



Year 3

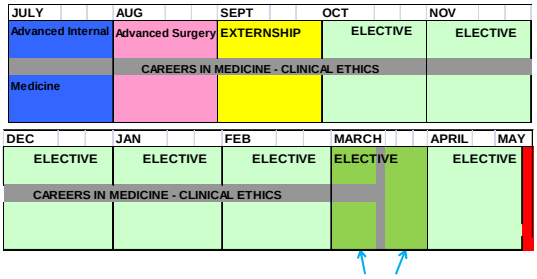
"New" Year 3



Year 3 "Selectives"

- **Clinical experiences "outside" of core**
  コア外の臨床経験
  - Dermatology, Anesthesiology, Radiology, Ophthalmology, Otolaryngology, Pathology, Radiation Oncology, Orthopedic surgery
- **Subspecialty experiences in "cores"**
  コアとなる専門科の経験
  - Cardiology, Maternal-Fetal Medicine, Transplant surgery, Pediatric Oncology, Forensic psychiatry
- **Neurosciences** 神経科学

Year 4



Internship 101

Internship 101

- **Elective in 4th year**　4年での選択内容
- **"Capstone" like offering**　業務は助かる(レベル高い)
- **Promote self-directed learning in students**
  学生の自己決定学習を促進
- **Designed like a CME conference**
  生涯学習カンファレンスのような計画に
  - Provided a menu of offerings　内容をメニューで提供
  - Simultaneous sessions　同時並行でセッションを実施
  - Students had to attend 30 hours of education
    学生は30時間出席しなければならない

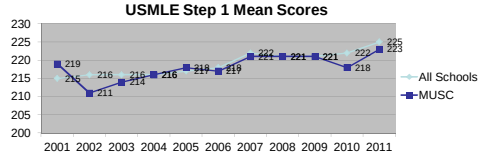
Partial listing of Internship 101 Topics

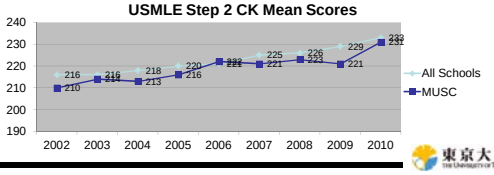
- Simulation Interprofessional Rounding Experience
- ACLS (Advanced Cardiac Life Support)
- Improving your clinical teaching skills
- Communication and Courtroom Testimony
- Wealth Accumulation During Residency and Beyond
- Survival Guides to your Internship
- Disaster preparedness and training
- Issues surrounding Death and Dying
- Billing and Coding clinical procedures
- Pain Management
- Medical Professionalism

Educational Outcomes

- **Difficult to study (no control group)**
  研究の困難さ(対照群もない)
  - Students are usually excellent 学生は通常良い
  - Delayed effect of interventions 介入の効果は遅い
  - Multiple confounding variables 交絡因子は多数
  - Teaching/Learning is dynamic 教育・学習は動的
- **Traditional measurements** 古来からの測定内容
  - "No harm" 害はない
  - Student Satisfaction 学生の満足度
  - Teacher Satisfaction 教員の満足度

Academic Performance

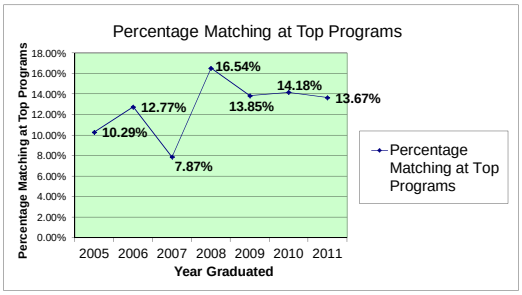




Student Satisfaction

- **Students are still competitive** 学生は依然競争的
- **More inclined to help colleagues** より友人を援助
- **New curriculum encourages cooperation**
  新しいカリキュラムは、協働を促進
  - Study groups 学習グループ
  - Peer-Teaching 相互教育
  - Team-Based Learning チーム基盤型学習
  - Peer-evaluation 相互評価
- **Top Ten most popular Medical Schools**
  最も人気のある医学校トップ10に

GME Match Results



Summary

- **Curriculum and culture change benefits from establishing underlying philosophy**
  カリキュラムと文化の変革は、基盤となる哲学を構築することから利益が生じる
- **Creative and support leadership from top**
  トップからの創造的で支持的なリーダーシップ
- **Hard work and dedication from below**
  下からは、勤勉さ、献身
- **Borrow liberally from others**
  他者から教訓を得る