

# MSM Integrated First Year Curriculum

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# Integrated curriculum

- Background
- Process
- Experiences
- Outcomes
- Plans for next year

# Medical School Curricula

- Flexner Report

- 1910

- Emphasis on basic science

- Emphasis on clinical clerkships

- “Traditional Curriculum”

# Traditional Courses

- Preclinical or basic sciences
  - Biochemistry
  - Anatomy
  - Physiology
  - Pathology
  - Microbiology
  - Pharmacology

# “Newer” Courses

- Genetics
- Neurobiology
- Cell biology and microanatomy (histology)
- Pathophysiology
  
- Clinical skills, physical diagnosis
- Behavioral sciences, interviewing skills

# Course Formats

- Lecture-based
- Discipline-based versus “organ systems”
- Case-based
- Problem-based learning
- Team-teaching
- On-line (distance)

# LCME 2005

- Partial or substantial noncompliance
- ED-33. There must be integrated institutional responsibility for the overall design, management, and evaluation of a coherent and organized curriculum.

# ED-33

- “limited central resources and strong departmental authority over the educational program combine to preclude effective integrated institutional responsibility for the overall design, management, and evaluation of the curriculum. ...largely unchanged from the last survey, when curriculum management was cited as a concern.”



# LCME 2005

- Other concerns were expressed about
  - too much lecture time
  - limited “self-directed study”
  - too many hours (over 1000 versus national average of about 700)
  - too many exams

# Student Concerns

- Overloaded daily schedule (sometimes six or more hours of lecture)
- No study time
- Conflicting demands between courses

# Integrated Basic Science Curricula

- About 40-50% of American medical schools have partially or completely integrated curricula
- In 2008, only 69 of 143 US and Canadian MD programs had a course titled “biochemistry” (48%)
- Wide variety of course titles and integration
- Same (about 90% congruence) topics/information taught in first two years

# Challenge

- Increase central control and coordination
- Decrease lecture and total contact time
- Same faculty
- Same amount of information on Step 1

# Premise—Do more by Doing less

- “The mind can absorb only what the butt can endure”
- Limit lecture by small time (120 min to 90 min)
- Decrease redundancy by improving order
- Combine some topics
- Combine exams

# Process

- 12-18 months of planning meetings by course directors
- Same faculty, same topics, different order
- Improved cross-disciplinary understanding
- Some within session integration

# Courses Combined

- Medical Biochemistry
- Human Morphology (already combining Histology, Embryology and Gross Anatomy)
- Medical Physiology
- Neurobiology (already an integrated course)

# Other First Year Courses

- Fundamentals of Medicine 1 (already combining Human Behavior, Epidemiology/Biostatistics, Human Values 1, and Clinical Preceptorship)
- Community Health (unique service-learning course)



# General Organization

- Basic Principles

- Organ Systems

- Musculoskeletal

(Lymphatic)

- Cardiovascular

Hematologic

- Respiratory

Endocrine

- GI

Reproductive

- Renal

Neuro

# Organizational

- Part functional (systems)
- Part anatomic (dissection order)
  - Organ Systems 1 “above the diaphragm”
  - Organ Systems 2 “below the diaphragm”
  - Organ Systems 3 “above the shoulders”  
(Neurobiology and Head and Neck)

# Time line

- 2005-2006 planning
- 2006-2007—detailed planning
- 2007-2008—integrated topic order, retained names of courses
- 2008-2009—same order of topics, change course designations

# Changes in 2007-2008

# Net Changes

- 55% reduction in scheduled lecture time
- 52% reduction in exam time
  
- No reduction in lab time
- No reduction in small group, clinical time

# Issues in 2007

- “front-end” loading of biochemistry

About 50% of biochemistry “points” in first two exams

Addressed with “in course enrichment” (ICE) tutorial sessions (led by Ms. Young)

# Addressed in coming Year

- Eliminated “biochemistry”
- Extended topic “footprint” (over longer time)
- Integrated “ICE” into schedule
- Complex process to “catch up” students in fall to allow “adapt to medical school” time

# Other Issues

- Irregularly irregular topic schedule
- This is an artifact of “integrated topics” without integrated courses

Now courses are time-based,



# Curriculum 2007-8

- Biochemistry 10 hr
- Human Morphology 14 hr
- Physiology 10 hr
- Neurobiology 7 hr
- Fundamentals of Medicine 1 7hr
- Community Health 4 hr

# Curriculum 2008

- Basic Principles 8 hr
- Organ Systems 1 12 hr
- Organ Systems 2 10 hr
- Organ Systems 3 10 hr
- Fundamentals of Medicine 1 7hr
- Community Health 4 hr