CURRICULAR ALCHEMY: TRANSFORMING UNUSED HOURS INTO GOLDEN OPPORTUNITIES THROUGH PRECLINICAL MINI-ELECTIVES

PURPOSE

• Medical student curricula are packed with essential courses and content that all students must master, yet most students find time to pursue other areas of personal interest.
• A goal of the recent curricular revision was to provide increased opportunities for such exploration and growth.
• We believe, and students confirm, that pursuing studies beyond the required curriculum can provide opportunities to individualize the curriculum.
• This provides students with exposure to topics and specialties that cannot readily be included in the core curriculum, and helps them to understand connections between their basic science coursework and medical practice.

METHODS

During the 1st and 2nd years, students have 2 afternoons per week with no scheduled course activities.

Implementation

A mini-elective is created by a course director in concert with curriculum leaders. The course must include the same elements as any other curriculum course offering, to ensure rigor and quality:

• Well-defined structure
• Learning objectives
• Specific requirements
• Optional prerequisites
• Logical build upon existing curricula
• Published curriculum

Detailed course outlines and as much curricular detail as possible are provided, to allow informed selections.

Course Structure

The courses typically involve:

• 4 to 8 two-hour sessions
• One day per week, over consecutive weeks
• Afternoon or evening sessions
• Out-of-class preparation or assignments
• Grading on a pass-fail basis
• A certificate of completion (non transcript)

Course Descriptions

Advanced Pediatric Interviewing

• Students in this course, offered late 2nd year, refine their directed interviewing techniques and become more effective at developing a differential diagnosis.

Art and Medicine

• The course is a collaboration with The Carnegie Museum of Art and the Andy Warhol Museum.
• Goals include helping to deepen awareness of the arts as a vehicle for understanding the human condition, and enhancing students’ proficiencies in perception and decision-making

Concepts in Human Motion

• Highlights rehabilitative efforts in identifying and treating disorders of locomotion, as well as introduces the adverse effects of motion and velocity on the human brain as evidenced through sports concussion.

Medical Journalism

• Taught by a faculty neurologist who is also an Emmy-nominated journalist on KDKA-TV, Pittsburgh.
• Students write medical news articles and practice interviewing, as they learn what it takes to translate medical science to make it understandable for the public.

Natural History of Medicine

• Partnership with the Carnegie Museum of Natural History.
• Students have a unique hands-on look at evolutionary medicine using the museum specimens and resources.

Nutrition and Complementary Medicine

• Topics in nutritional medicine pertinent to common health conditions & disease prevention

Pandemic Preparedness and Response

• Emerging infectious diseases, public health preparedness
• Builds on Medical Microbiology course.

The Healer’s Art

• Cultivates the human dimensions of the practice of medicine

An In-Depth Look at One Mini-Elective: Medicine and Literature

• Examines how physicians and medicine have been portrayed in literature through the ages.
• Established methods used in literary criticism help medical students to reflect more deeply upon standard medical writing from a variety of perspectives
• Studying many different kinds of culturally relevant literature (drama, poetry, children’s literature, popular fiction, classics) leads students to explore how our culture imagines and interprets the experience of medicine.
• One goal is to understand better how our own words in the office may echo the “divine healer”, the “mad Scientist,” the “charlatan” or other mythological healers in our patients’ ears—so that we can consciously communicate more effectively with patients.

Why bother studying medicine and literature?

The course addresses stereotypical views of physicians in literature and society, for example:

• Physicians as tools of the plot, to be used in order to further some other character’s agenda. We explored this role using
  • Five Little Monkeys (children’s rhyme)
  • Pride and Prejudice
  • Romeo and Juliet The Mother
• Physicians as charlatans, looking to make money from patients while hoping that no one will notice that they are not doing anything useful. We explored this in
  • You’re Only Old Once by Dr. Seuss
  • The Imaginary Invalid by Moliere
• Physicians as dangerous & evil “mad scientists,” as seen in
  • Doctor Fell from Mother Goose
  • The Strange Case of Dr. Jekyll and Mr. Hyde
  • The Birthmark by Nathaniel Hawthorne
• Physicians’ work of healing as a mark of holiness or royalty as depicted in The Bible & The Lord of the Rings
How can these concepts best be addressed in the context of an intensive medical school curriculum?

- The concise mini-elective format is ideal because it allows students time to read the texts, ample opportunity to reflect on and discuss them, as well as practice making use of the literary critical methods, without becoming a burden or adding to the stress of the academic year.
- Medical students often see literature as a delightful break from their more dry and memory-intensive courses.
- Literature and critical methods can be an attractive course for any level of medical student.

**Student Comments on Medicine & Literature**

Comments on this course have been very positive, for example:

- “The small group interaction and conversations helped me learn.”
- “I really enjoyed how you gave us reading each week to illustrate how doctors communicate and are portrayed in the literature, and liked how you had organized the reading each week around a theme – it was a nice break from medical school!”

**RESULTS**

- These courses have been heavily subscribed by students, with several courses having to establish a waiting list for enrollment.
- Course evaluations have revealed that the student assessment of content and quality has equaled and often exceeded the norm.
- Faculty are continuing to make proposals for new offerings.
- Unlike the typical course offering, there have been no reports of difficulty in recruiting instructors – likely a result of self-selection and excitement about the opportunity to teach in a domain of a faculty’s special interest or expertise.
- In some cases, students have made new connections with faculty that have resulted in unique scholarly project undertakings (e.g. investigation of an Egyptian mummy at the Carnegie Museum of Natural History).

**CONCLUSIONS**

- Mini-electives represent a golden opportunity to use small aliquots of time to help students explore topics that complement their core education.
- These have been terrifically popular with students, even though these are rigorous courses that demand time and preparation.
- Faculty welcome the chance to work with keenly interested students who want to reach beyond the core curriculum.
- The mini-elective program has been a highly successful addition to the curriculum, and is a model that can readily be adopted by other institutions.

**NEW MINI-ELECTIVE COURSES  2007-2008**

- The Real World of Medicine: Business Aspects
- Occupational Lung Diseases
- Plastic Surgery
- Vascular Surgery- Abdominal Aortic Aneurysm
- Vascular Surgery - Carotid Artery Disease
- Essential Procedures in Clinical Medicine

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