

**Scientific Foundations Committee**  
**Meeting**

June 3, 2011

7:30 – 9:00 am, B-646 Mayo

**In attendance:** A Bleas, B Clarke, W Donigan, A Edverson, B Fleischmann, S Katz, K Lee, A Minenko, C Niewoehner, J Norrander, L Perkowski, L Schimmenti, P Schlievert, P Southern, D Wangensteen, K Watson (@ CEC), T Weinhaus, K Wickman, R Wong, M Woods

**Absent:** S Allen, L Anderson, M Becker, E Coleman, G Filice, G Giesler, R Hoffman, M Hordinsky, T Killeen, N Lipin, S Levine, T Mackenzie, K Nordby, D Powell, M Sanders, B Varda,

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At the beginning of the CEC and SFC meeting a joint breakfast was held to recognize long standing excellence in teaching and to celebrate the success of the revised curriculum. Several course and clerkship Directors were recognized for their years of commitment and dedication to teaching medical students at UMMS. Drs. Pena, Schlievert, Vercellotti, and Wangensteen were thanked for their many years of work to enhance medical education at UMMS.

### **Minutes**

Minutes for May 6th meeting were reviewed and approved with no changes or additions.

### **Update**

#### Embryology

Dr. Weinhaus reported on the structure of the Embryology course for Fall 2011, which the Education Steering Committee has endorsed. The course will provide basic principles of embryology and will primarily cover basics that are significant in helping students to understand the more difficult concepts of gross anatomy. Dr. Katz asked about the status of the proposal to ESC to coordinate embryology with development and genetics in Biochemistry. In response to questions regarding Embryology in coordination with Biochemistry, Dr. Weinhaus indicated that the Biochemistry schedule is very different from that of the Gross Anatomy course. He noted it will be helpful to have the basic material covered before the Biochemistry occurs. He provided details of timing for the courses indicating how different the placement of embryology is in each course. Within Anatomy it takes place very early and within Biochemistry it is near the end of the course. The structure may change in the future, but at this point each course will include aspects of embryology that are needed for the individual course. Dr. Weinhaus pointed out that the time available isn't to create a larger course scenario that includes all of embryology concepts. Dr. Katz recommended that once the final decision for what will occur in Gross Anatomy and when it will take place has been made, sharing the information with Histology, Biochemistry and Genetics is critical for the purpose of coordination. Dr. Weinhaus responded that sharing those details with the other course directors will take place.

### **Annual Course Summaries**

#### Microbiology

Dr. Patrick Schlievert reported that the current Year-1 students probably have a higher level of achievement in the Microbiology course than any class in his 25 year of teaching. He provided an overview of the course's learning outcomes which include knowledge of the following:

- Structures of common pathogenic microbes related to antimicrobial therapies/strategies of disease causation
- Mechanisms of transmission and pathogenesis of common microbes
- Innate/adaptive immune systems and interaction, their roles in protection from pathogenic microbes
- Principles of immune deficiency, hypersensitivity, autoimmunity and allograft rejection

Dr. Schlievert reported on the evidence used to determine that outcomes are being achieved, what works well in the course and areas of concern. Changes to the course include a new course director, as Dr. Schlievert is leaving the University. Dr. Peter Southern will replace him and has worked closely on the Microbiology course for a number of years. Areas impacted and how concerns will be addressed, include the following:

- additional Microbiology faculty will be recruited to replace the lectures previously given by Dr. Schlievert
- efforts will be made to keep the number of faculty low
- a third graded quiz covering virology will be added- to address rapidly changing aspects of micro
- updating the Study Guide and the Laboratory Manual will continue
- criteria will be established for giving students honors grades, based on objective outcomes and will be based on more than quiz and exam scores

Dr. Schlievert reported that he attends most of the lectures to stay on top of what is being taught at each session, this year the FCT cases were added at the beginning of each lecture. These cases help to focus the lectures and help to generate questions from the entire class. Students respond very positively to the exam questions and format overall.

Dr. Niewoehner asked for feedback from Dr. Schlievert regarding treatment of Infectious Disease in the revised curriculum. He reported concerns expressed by experts in ID because the result is ID has become a thread in the curriculum. Because a significant number student missed ID questions in the exam, he feels it would be better if the students knew there is a formal discipline. Linking ID to Microbiology is more favorable than the current model. Dr. Southern spoke about how ID can be enhanced within Microbiology by possibly using the following steps:

- case vignettes
- specifically how does ID fit in
- a statement for the importance of ID
- transition to linkage between year 1 and 2
- make the message explicit
- FCT's can play a role, can provide the relevance
- a larger role for ID in small group sessions (discuss terminology, etc)
- resist the tendency to make FCTs a larger focus because of the amount of material in Spring courses and the time needed
- suggestion to use small group sessions to focus explicitly on ID in the HD courses
- now that the FCT cases are established it will help to better plan ID coverage in 2011-12

How are lab session organized?

- 15 min lecture to start each session
- gradually increase the conceptual technical background
- review lab exercise material in advance of lab session
- lab manual is organized by exercise
- staff teaching assistant who work with students throughout each session
- hold discussions and engage students to participate
- lab exercises relate to material they are seeing in class
- students have a varied level of lab background, which enhances everyone's lab experience

There are two mandatory written exercises required; one is a short paper on a journal article related to their specific lab findings. This requires that they go to the literature to find related material to learn further and then write a synopsis. Dr. Southern is available and interacting with students during the lab sessions to respond to conceptual questions and to spur students to discuss and interact with him and each other as part of the learning environment.

## HD IV

Course Director, Dr. Anne Blaes described the Human Disease IV course as integration of the former Gut course, the Blood course and introducing threads of pharmacy and infectious disease. The learning objectives are to help the students get a better understanding of pathophysiology of the GI system (stomach, liver, gallbladder, and bowel). In addition to help students understand the pathophysiology of benign and malignant blood disorders. Integration of with pharmacology is to help them to begin to understand the drugs that are used with pathophysiology of these diseases and other infectious diseases that affect the GI system and diseases of the blood.

With regard to evidence of achieving the goals HD IV used the grading policy that is set for implementation next year, requiring student to achieve 70% on the overall course and on the exam to pass. The change in grading practices resulted in 3 students retaking the exam because they didn't achieve 70% on their first try. Students were highly engaged and participated in the small group sessions which have approximately 10 members making them very effective for students. There are a large number of small group sessions in both the blood and gut sections. In the challenge portion of the exam students had questions, but their grasp of the material was much greater than in the past. Their level of applying knowledge was at a high level and exam questions will have to be rewritten to accommodate the advanced level of thinking.

Dr. Blaes discussed aspects of the course that work very well and also areas of concern. Collaboration among faculty, excellent small group interactive sessions, combined course packets and highly responsive faculty are strengths. Concerns included the structure of the lab exam (there is also a written exam), 33% of grading is based upon attendance of small groups and labs, web site organization, requests for reconfiguring lab lectures and lab sessions, changes to GI portion, lack of evaluations and greater integration of the exam questions. Changes planned for the academic year 2011-12 include the following:

- re-evaluating how ID is presented within HD IV (consideration for integrating Pathology and ID)
- working more closely with Pathology to identify a faculty member dedicated to HD IV
- modify readings
- small group key-point summaries to provide consistency across all small groups
- ensure labs are interactive, similar to small group format
- increase assessment tools and add quizzes (required on-line) prior to small group sessions
- reduce portion of course grade related to attendance
- changes to Pathology portion to lessen "lab lecture" model

Several course directors gave feedback for implementing additional assessments and timing quizzes for maximum feedback value. Up-To-Date was supplemental reading for HD IV to enhance required readings; it gave students practice using reliable data resources.

During discussion regarding Independent Learning Time (ILT), course directors expressed frustration because "course reviews" cannot be scheduled during ILT. A medical student reported that students have made requests to change that practice and have been told it isn't an option. Exemptions were made for some courses during Spring semester. Discussion continued and course directors voiced support for using "faculty office hours" as review sessions, holding office hours in the classroom so they can be recorded. It was noted that the lecture hall setting doesn't lend itself to interactive discussions. Dr. Niewoehner suggested that ILT be a future topic of discussion, (how it should be used, if it should be more directed or remain the same?). There were no conclusions drawn or resolutions determined at this time for how to use or change ILT, this topic is scheduled for discussion by the ESC.

*Next Meetings:*

*Curriculum Committee*

*June 10, 2011*

*SFC*

*July 8, 2011*