

Scientific Foundations Committee

May 1, 2015
7:30 – 9:00 am
Mayo B-620

Minutes

2014-2015 Scientific Foundations Committee Members		
MEMBER	COURSE/ROLE	ATTENDANCE
Steve Katz	Chair (INMD 6814 Physiology)	
Sharon Allen	INMD 6803/6804/6805 ECM 1, ECM 2, ECM 3A	
Richard Amado	INMD 6815 Human Behavior	
H. Brent Clark	INMD 6819 HHD – N & P	x
Eli Coleman	INMD 6816 Human Sexuality	
Greg Filice	MS 2 ID Thread	x
Glenn Giesler	INMD 6813 Neuroscience	
Bob Kempainen	INMD 6808 HHD – C & R	x
Anne Minenko	INMD 6809 HHD – R, D & O ³	x
Kaz Nelson	INMD 6819 HHD – N & P	x
Catherine Niewoehner	INMD 6810 HHD – R & E-R	x
James Nixon	INMD 6803/6805/6806/6807 ECM 1, ECM 3A/B/C	
Jan Norrander	INMD 6801 Human Structure and Function	
Deborah Powell	INMD 6817 Principles of Pathology, MS2 Pathology Thread	x
Michel Sanders	INMD 6802 Science of Medical Practice	
David Satin	INMD 6803/6804/6805/6806/6807 ECM 1, ECM 2, ECM 3	
Lisa Schimmenti	INMD 6802 Science of Medical Practice	x
Peter Southern	INMD 6812 Microbiology	x
Heather Thompson Buom	INMD 6811 HHD – GI & Heme	
Doug Wangenstein	INMD 6814 Physiology	
Tony Weinhaus	INMD 6801 Human Structure and Function	
Kevin Wickman	INMD 6818 Principles of Pharmacology	x
Mary Ramey	MS2 Lab Med/Path Coordinator	x
Kevin Kay	MS2 Student Representative	x
Nicole Cairns	MS1 Student Representative	
<i>Mark Rosenberg</i>	<i>Vice Dean for Medical Education</i>	
<i>Kathy Watson</i>	<i>Senior Associate Dean for UME</i>	
<i>Jeffrey Chipman</i>	<i>Assistant Dean for Scientific Foundations</i>	x
<i>Majka Woods</i>	<i>Assistant Dean for ACE</i>	
<i>Anne Pereira</i>	<i>Assistant Dean for Clinical Education</i>	
<i>Michael Kim</i>	<i>Assistant Dean for Student Affairs</i>	
<i>Brad Clarke</i>	<i>ACE Curriculum Specialist</i>	
<i>Leslie Anderson</i>	<i>Chief of Staff, Medical Education</i>	
<i>Scott Slattery</i>	<i>Director of Learner Development</i>	x
<i>Heather Peterson</i>	<i>Medical School Registrar</i>	
<i>Brian Woods</i>	<i>Lead Course Manager</i>	x

Guests: Chelsey Jernberg, Serena Sherrell, Theresa Hudachek

The meeting was called to order at 7:30am.

Minutes

Draft minutes from the April 3 meeting were approved with one correction.

Updates/Announcements

2015-2016 meeting schedule

SFC meetings will move to the 2nd Friday of each month beginning in August 2015. The room will change back to Mayo B-646. This will allow those that need to attend both the SFC & CEC meetings. Particularly as the push for more integration from years 1-4 moves forward. There will be joint committee meetings quarterly.

Best Practices Day

There is still time to register for the activities. The agenda was distributed

Student Issues/Concerns/Questions

Second year students are hard at work studying for the Step 1 Exam.

Annual Course Review

Human Health & Disease – Neuro & Psyche

See attached ACR for detail.

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This was the first year for this course, which was originally part of the old HD2 course. Neuro & Psyche became its own course. The biggest problem was a lack of time compared to when it was integrated in HD2. Some content had to be left out; some ILT time had to be used.

Kaz Nelson was the psyche lead, Brent Clark was the neuro-path lead; there was not a not a firm and consistent neurology lead. This was a problem.

Students rated non-graded self-assessments opportunities as higher than usual: 3.8.

Working well:

- For Course Directors, this was much better as a separate course, rather than having it integrated into the old HD2. Students didn't have an opportunity to compare it to prior years, but they appreciated the course. Thanks to the Medical School for separating these subjects out, despite the scheduling challenges it created.
- The primers were appreciated by the student. Per the 2nd year rep, some students still print out materials, though most use materials online.
- Labs—Dr Powell doesn't teach the labs in this course; they are taught by the neuropath department. However, there were some personnel problems, so unfortunately there was not always a steady presence in the labs.
- There was great student appreciation for Dr Clark's neuropath model of organization. There is a tight integration of the primer, lectures, labs, and small groups. Since there only one organ system covered, this works well, but this model may be troublesome in other courses with multiple organ systems to cover.

Areas of concern:

- The quality of the neurology lectures was variable. Lectures were often taught too high above students' current knowledge. Lecturers forget where they themselves were, knowledge-wise, in Year 2. The highest rated neurology lecture was given by a resident.
- Per Kevin Kay, the short time-frame of the course ups the stakes for each lecture in students' minds. Dr Chipman reminded Course Directors to remind their lecturers of the level of these students. These are Year 2's, and not residents. Teaching is a skill that must be communicated & learned.
- In Neurology, there were not consistent materials for students. Without a discipline lead, there was not a point person to take care of questions and problems in this area.
- Due to this being the first year that the course was offered, the final exam was short, and many questions were accepted through challenges. Students actually wanted more questions on the exam in order to show their knowledge. Most questions were written from scratch, as the questions from the HD2 course were more integrated. Dr Powell suggested adding a few short-answer questions. This would be more possible since this is a "single-subject" course, and these would test the integration of topics better.

Dr Nelson asked for suggestions on how to get more questions:

- Dr Wickman has students write questions as an assignment. It takes some work to sift, refine, and grade them, but the question bank grows. Dr Chipman noted that students use question banks to guide their study.
- Dr Minenko advised to be careful that students don't only submit fact-based questions. There needs to be some higher-order reasoning questions. It takes a year to see where the connections are between lectures, labs, and small groups. Also, Course Directors should discourage studying to the questions—be clear about what the learning objective of the question is and how it ties to the learning activity.
- Dr Niewoehner suggested that for practice questions, propose a case vignette that develops a theme with multiple feeds tied to the topic that may have multiple answers.
- Dr Nelson noted that in her experience, students don't like to have the practice questions in a different format than the final questions. Kevin Kay noted that the format may be different as long as the intent of the practice questions is clear.

Progress of changes from last year:

N/A, as this was the first year of course.

Planned changes for next year:

- During the debrief after the course, Neurology was implored to get organized, and listen to the student feedback. There is now a new vice chair for education in Neurology, and he will work with 2 senior Neurology residents to develop their part of the course. Residents will do most of the lecturing, with an expert in the room to answer questions.

Dr Clark uses residents in his neuropath labs. Dr Powell also uses residents in the labs and they are monitored and evaluated. If they do well, she invites them to lecture and gives the oral & written feedback. Dr Niewoehner uses fellow in HHD4. These residents were very proactive, and have subsequently met with Dr Chipman about medical education. This could be a model for courses to tap the residents in other areas, too. Dr Chipman would like the SFC to consider formalizing the use of residents/fellows in teaching courses, and present it to the Graduate Medical Education Association.

- Kevin Kay noted that this course contains the largest pharmacology block in the shortest amount of time, compared to the other HHD courses. Many students felt overwhelmed by this. Perhaps this is a good opportunity for re-evaluation of which courses drugs should be presented in.

Comments:

- Overall, this course went better than the Course Directors hoped. Many thanks to Serena for all her help.
- Dr Minenko asked about how Neuroscience in Year 1 compared to Neurology in Year 2. So, where is the opportunity to bridge these courses? Context is very important. Per Kevin Kay, because of the short nature of the course students only are looking at what is in front of them in HHD3. They don't really go back to Neuroscience to review the specifics. Dr Nelson understands that integration that is needed in HHD3 but that each thread in the course must be on the same page regarding an appropriate level of teaching.
- Dr Clark does review some anatomy in his intro lecture. There is some anatomy taught in first year that isn't relevant in the clinic, so it's difficult to re-teach what is necessary.
- Kevin Kay—it is a huge help when lecturers highlight and make clear what students need to know. Use a different color. Also, from a PR standpoint, let students know that instructors look at study prep materials.
- Dr Filice noted that students will actually be experiencing the things talked about in this course (memory, stress, etc.) due to the compactness of this course. The boards are changing to start with clinical vignettes and then test reason. It's important for faculty to be aware of this trend when writing questions.

Dr Chipman commended Dr Nelson & Dr Clark for a great first year.

Discussion

New Integration Milestone Exam

Dr Chipman explained that institutional assessments are given to second year students and link and integrate content in multiple modalities. Long-term, there will be a first year integrated milestone exam as well.

Last year's assessment well received by the students. There will be a new assessment written for next year and he wants to make sure that Course Directors are aware of the topics to make sure that content is covered in the courses.

There is general agreement among the Course Directors that the new topic is addressed in various courses over both years. Dr Chipman challenges other Course Directors to submit topics for new exams each year. The SimPortal is interested in giving practice opportunities to students using various cases.

Future Agenda Items

Suggestions from Course Directors for future SFC meeting topics:

- Professionalism: definition, enforcement, longitudinal integration
- Student disability services and accommodations
- ExamSoft & BlackBag assessments
- ILT feedback
- Copyrights & resources (focused on what we *can* do)
- Course administrator co-directors (not the dyad)
- Future joint meeting of CEC and SFC on longitudinal integration of basic science and clinical medicine
- More Blackbag search examples
- SFC web site for action item storage
- Survey students about type of practice questions/formative
- Human Behavior course

The meeting was adjourned at 8:48am.

The next meeting is June 5, 2015, from 7:30-9:00am in room Mayo B-620.

Respectfully submitted,
Brian Woods

Annual Course Review (ACR)
University of Minnesota Medical School

Course: *Human Health & Disease: Neuro & Psyche*
Course Director(s): *H. Brent Clark, MD, PhD & Kaz Nelson, MD*
Course Manager: *Serena Sherrell*

Date of course: *Fall 2014*

November 24-December 12: didactic material, labs and small groups
December 17 and 18: final exams

Overall evaluation of the course: *3.9*

Number of failures for academic year: *none*

1. Briefly describe the learning outcomes for your course

Course Objectives:

- This course introduces the major mental disorders, including disturbances in affect, cognitive operations and behavior. Students will recognize the signs and symptoms, clinical course, prognosis and treatment of the major mental disorders.
- Students will state the clinical essence of each mental disorder and be able to recognize that disorder and distinguish it from other disorders when given a clinical narrative.
- Students will be able to describe the clinical method of arriving at an anatomic diagnosis in neurology, learn how neurologic disorders are classified, and understand the role of protein aggregation and plasticity as core concepts in neurodegeneration and the response to injury in the nervous system.
- Students will understand the basic disease processes relevant to the CNS in order to increase their ability to 1) interpret imaging scans and other diagnostic studies, 2) predict the course of the disease process, and 3) provide rational therapeutic planning where appropriate.
- From an infectious disease standpoint, students will be able to describe CNS defenses and describe epidemiology, presentation, and management of viral encephalitis and meningitis.
- Students will understand the pharmacokinetics, metabolism, and indication for pharmacologic agents relevant to the central nervous system.

Points for HHD – N&P are awarded as follows:

	Required?	Point Value	% of all points
Formative Assessments			
Path lab attendance and participation (3)	Yes	6	5%
Psyche small group attendance (3)	Yes	6	5%
Neurology small group attendance (1)	Yes	2	2%
On-line Self-assessments (2)	No	0	0
Formative Subtotal		14	11%
Summative Assessments			
Mid-term examination	Yes	30	24%
Final Written Exam	Yes	60	48%
Final Path lab practical exam	Yes	20	16%
Summative Subtotal		110	89%
Total Course points		124	100%

Course Honors earned by 39% of the class

One student did not achieve honors due to non-completion of the evaluation.

Honors were awarded to students who fulfilled the following:

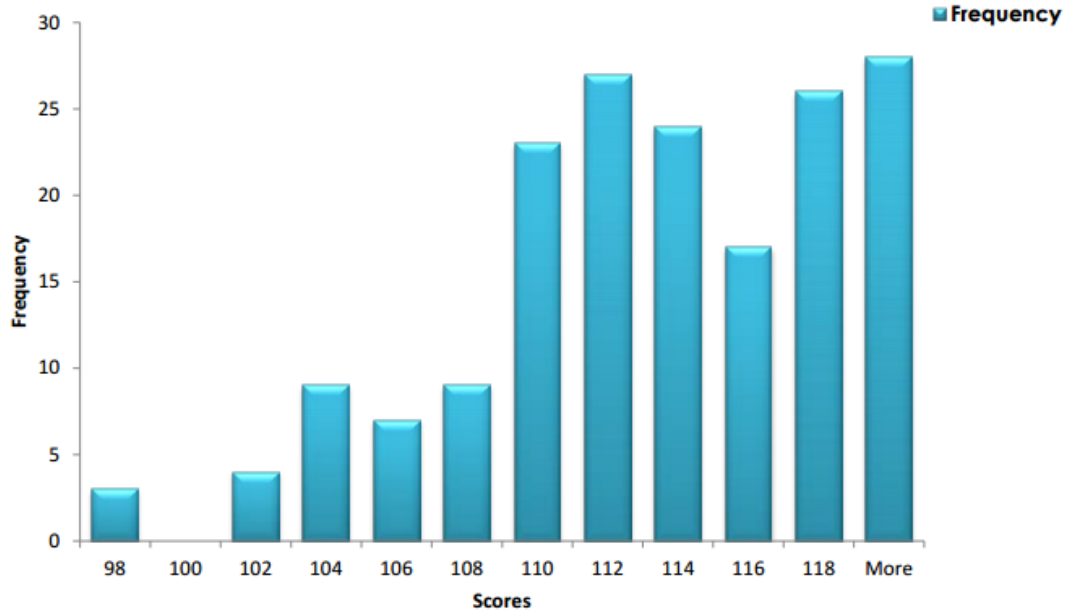
1. Receive 93% or more of total possible points in the course
2. Obtain at least 70% on the final written exam and final Lab Practical (combined).
3. Attend (or complete make-up requirements for) all small groups and pathology labs
4. Complete the Course Evaluation

2. Describe what evidence you have that the outcomes are being achieved. Include student review information.

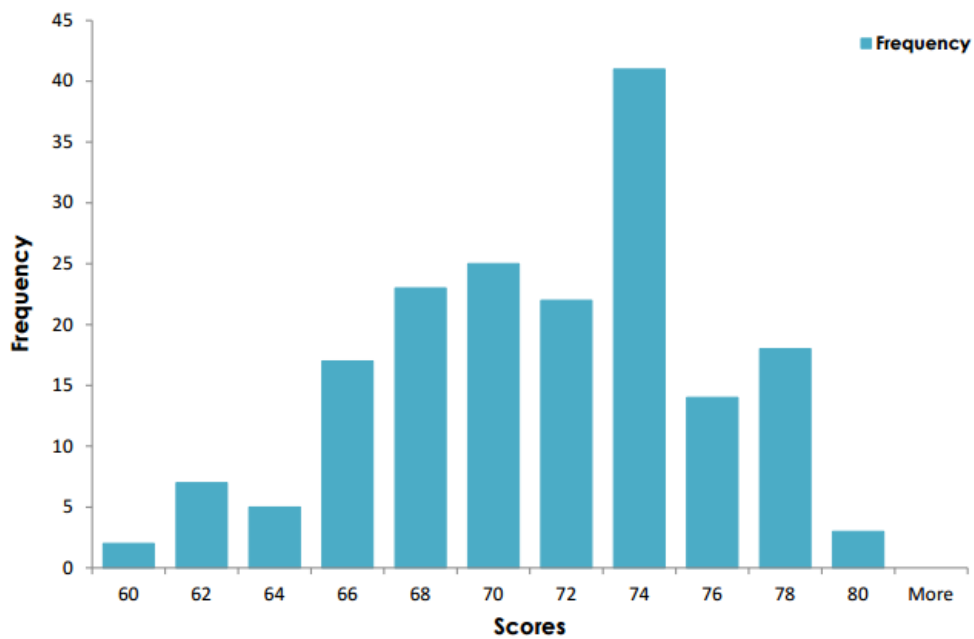
Basic Science Core Rating Items	INMD 6819						
	Responses				Course		
	SD	D	N	A	SA	N	Mean
Q1 The course objectives were made clear to me.	0	7	20	93	22	142	3.9
Q2 The assignments planned for independent learning time facilitated my learning of the course material.	1	15	34	68	24	142	3.7
Q3 There were adequate opportunities for non-graded self-assessments (i.e. quizzes, discussion questions, practice or review questions).	5	13	20	73	31	142	3.8
Q4 The resources provided for the class were useful in learning the material: (i.e. recommended readings, course packet, BlackBag site)	1	8	22	64	47	142	4.0
Q5 There was close agreement between the stated course and session objectives and the information taught.	1	14	32	76	19	142	3.7
Q6 The graded assessment(s) appropriately tested the course objectives.	2	31	27	69	13	142	3.4
Q7 Overall, I have acquired an understanding of the stated course objectives.	1	6	24	90	21	142	3.9
Q8 The course content was successful in integrating basic science knowledge and clinical practice.	4	11	24	82	21	142	3.7
Q9 Public Health topics were integrated within the course.	2	30	48	51	11	142	3.3
Q10 Quality Improvement topics were integrated within the course.	4	40	64	27	7	142	3.0
Q11 Interprofessional Education topics were integrated within the course.	4	51	58	24	5	142	2.8
Q12 Overall, I have found this course to be valuable.	1	7	27	81	26	142	3.9
Responses: [SD] Strongly Disagree=1 [D] Disagree=2 [N] Neutral=3 [A] Agree=4 [SA] Strongly Agree=5							

One student failed the written final exam and another student failed the lab exam. Both students passed the overall final exam. No student failed the course.

HHD - NEURO & PSYCHE Final Course Score Distribution Histogram 2014-2015



HHD - NEURO & PSYCHE Final Written Exam & Neuropath Lab Practical Exam Score Distribution Histogram 2014-2015



3. Describe what is working well in your course

1. Implementing this new course with two disciplines and 3 threads was a welcomed and significant improvement compared to the prior model of HD2 (seven disciplines and four threads).
2. Self Assessments- Students appreciated having weekly non-graded self-assessments (Mean: 3.8). Even though the Midterm exam was graded, it was helpful in setting expectations for the final exam and helped students feel more confident in their knowledge.
3. Excellent communication and coordination between the course directors, manager and student leads. Infectious disease (Dr. Filice) and pharmacology (Dr. Law) discipline leads were responsive and helpful.
4. Students appreciated having a comprehensive syllabus/primer for the neuropathology and psychiatry components.
5. The lab and small groups were well organized and generally appreciated.

4. Describe any areas of concern.

1. The neurology discipline did not have a lead available to work with the co-directors in course planning, management, and vetting/monitoring of lecture content, presenter skill, and exam questions. This lead to variable quality in the neurology content and contributed to student frustration. Lecture content was frequently not sufficient in terms of reasonable quantity and complexity. Neurology did not have a comprehensive syllabus for student reference.
2. The course is extremely fast-paced and condensed. We needed to eliminate small groups and labs. The calendar length made it difficult for students to keep up with the multiple assessments and educational content. The Thanksgiving Holiday also interrupts this course. Unfortunately, we needed to use independent learning time to make room for essential lecture content.
3. The FCT case was not appropriate for the block.
4. The final exam did not have enough questions to comprehensively assess the student knowledge base. We plan to maintain the current honors criteria, since we plan to increase the number of exam questions, which may impact the difficulty.

5. Describe the progress of the changes being made as the result of your previous ACR

This is a new course, first ACR.

6. Describe any changes you intend to make for the next academic year.

1. The HHD N&P team met with representative from Neurology, including Dr. Santiago, the newly identified Vice Chair for Education and we reviewed the course feedback. Dr. Santiago will identify a discipline lead and have identified two neurology resident/fellows to assist with course organization, teaching, and authorship of a course syllabus. We believe these changes will significantly enhance the neurology content and course organization.
2. We will advocate for more calendar time in subsequent academic calendars. Based on the draft of the upcoming academic year, we will need to utilize ILT to keep the same number of lab and small groups. This is not yet reflected in the plan.
3. We will work with Brad Clarke to ensure an appropriate FCT case is used during this block.
4. We will aim for 80-100 final exam questions.
5. We will need a plan to integrate public health, quality improvement and interprofessional education.

H. Brent Clark and Kaz Nelson
HHD3 Course Directors