Medical Sciences M620: Pedagogical Methods in the Health Sciences
Spring 2007

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Office Hours: F 10-12 or by appointment R 9-11 or by Appt

Class days/times: Fridays, 1:30-4:30 (1:00-3:30 on P215 exam days)
Classroom:                JH 102 (Alumni Room)  Credit Hours:  3

Course Description: This course is for biomedical sciences graduate students who want to be excellent instructors and classroom researchers. Students will learn about pedagogical methods, student learning styles and methods of instructional delivery. Students also will learn about the scholarship of teaching and develop a foundation for implementing classroom research and assessment.

Learning Goals: Students in this course will achieve the following learning goals and objectives:

- Learn how to construct a syllabus and choose appropriate course readings
- Examine the different student learning styles and how an individual can tailor your instruction so as to help students of all learning styles
- Learn how to present instructional material in a clear manner (microteaching)
- Compare and contrast different instructional methods, such as lecture format, discussion, collaborative and group learning, etc, and determine which methods may be most beneficial in a course.
- Learn the basics of classroom research and the assessment techniques used in such research.
- Become familiar with the Scholarship of Teaching and classroom research literature that is most related to the issues you want to explore.
- Prepare a statement of teaching philosophy that may be used for future academic job interviews
- Prepare a course or teaching portfolio that documents assessment, reflection and analysis of one’s teaching

Reading Assignments: In addition to the journal articles listed in the syllabus below and on reserve at the Life Sciences Library, the following text is required:


Recommended texts include:


Website: M620 has an accompanying website where you may find the assigned readings, a copy of the syllabus, and a listing of the assignments by week. Please refer to this site frequently: http://medsci.indiana.edu/m620/start.html

Course Requirements and Assessment: Students will be graded based on the successful and timely completion of the following items:

1. Participation – is based on the following: (25% of grade)
   a. Class attendance
   b. Active participant in discussions
   c. Peer analyst for microteaching sessions
   d. Presentation of one microteaching session
   e. Presentation of the course syllabus and description
   f. Presentation of teaching portfolio or mock classroom research grant
   g. Completion of a beginning-of-semester and end-of-semester survey about your thoughts on teaching and learning

2. Two (2) teaching observations of two health sciences instructors of your choice (15% of grade)
   a. Students must request participation to sit in on each class, and fill out a personal analysis for each observation (template for analysis to be distributed during M620)

3. Preparation of a sample course syllabus and description (15%)
   a. This course must be a NEW course that you would hope to teach in the future. You must construct the syllabus, determine the appropriate assignments, and choose appropriate readings.
   b. Students must present their sample syllabus and description to the class (a.k.a. the “review board”) and justify its creation.

4. Preparation of a teaching philosophy/statement (10%)

5. Teaching Portfolio or Course Portfolio (35% of grade)
   a. Students are encouraged to seek assistance from CIC (Campus Instructional Consulting) and the instructors about developing a basic teaching portfolio or course portfolio for a course they’ve already taught. See: http://www.indiana.edu/~teaching/ for contact information
   b. See http://www.indiana.edu/~deanfac/portfolio/ for an introduction to course portfolios.

-OR-

Preparation of a “mock” Classroom Research project grant (35% of grade)
   a. Student must review opportunities for granting funds for classroom research projects, and prepare a mock grant for a proposed project
   b. IRB (Human Subjects) documentation must be attached with the grant – see http://www.indiana.edu/~sotl/humansub.html for information about Human Subjects protection in Scholarship of Teaching research
<table>
<thead>
<tr>
<th>Date</th>
<th>Topic(s)</th>
<th>Readings (do prior to class)</th>
<th>Assignments (due the following week)</th>
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<tbody>
<tr>
<td>Jan 12</td>
<td>INTRODUCTION</td>
<td>Godfrey: Training the Trainers</td>
<td>Write title and think about “fantasy course”</td>
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<tr>
<td>(week 1)</td>
<td>Reviewing syllabi</td>
<td>Leonni: Fish is Fish</td>
<td>(to be used throughout semester)</td>
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<td>Profiles of the Typical Undergraduate</td>
<td>How People Learn, Ch 1 (intro)</td>
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<td>Diversity in the Student Body</td>
<td>McKeachie, Ch 1 (intro)</td>
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<td>Instructional Observation Directions</td>
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<td>What makes a good instructor?</td>
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<td>What makes a good course?</td>
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<td>Beginning-of-semester Teaching/Learning Survey</td>
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<td>Block 1: STUDENT LEARNING STYLES</td>
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<td>Jan 19</td>
<td>Expert vs. Novice Learner</td>
<td>How People Learn, Ch 2 and 3</td>
<td>Prepare Microteaching Session</td>
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<td>(week 2)</td>
<td>Personal Learning Assessments</td>
<td>McKeachie, Ch 2 (countdown)</td>
<td>Take VARK test, print out your results</td>
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<td>Perry’s scheme of Intellectual Development</td>
<td>Perry, Table 1.1, Intro, Glossary</td>
<td>Prepare list of student stumbling blocks</td>
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<td>Microteaching instructions</td>
<td>Ross, the Expert Mind</td>
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<td>Jan 26</td>
<td>VARK Learning Styles</td>
<td>Fleming: VARK</td>
<td>Revisit stumbling blocks list, write up ways to</td>
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<td>(week 3)</td>
<td>Theory of Multiple Intelligences</td>
<td>Michael et al: Respiratory Physiology</td>
<td>help students with these blocks</td>
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<td>Students Pet Theories &amp; Naïve Misconceptions in the Health Sciences</td>
<td>Savion: Pet Theories</td>
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<td>Merrill 5 Star</td>
<td>Merrill: 5 star</td>
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<td>* Microteaching presentations</td>
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<td>Block 2: TEACHING STYLES AND DELIVERY</td>
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<td>Feb 02</td>
<td>Lecture Format: Pros and Cons</td>
<td>McKeachie Chs 5, 6, 12</td>
<td>Write up 1st instructor observation.</td>
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<td>(week 4)</td>
<td>How to deliver an effective Lecture</td>
<td>Cantillion: Teaching Large Groups</td>
<td>(use form on web)</td>
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<td>PowerPoint Dos and Don’ts</td>
<td>Craig: PowerPoint &amp; Teaching</td>
<td>Do a short Myers-Briggs analysis</td>
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<td>Interactive PowerPoint Tools</td>
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<td>(bring results to class next week)</td>
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<td>Presentation by Dr. Chris Quirk, Medsci:</td>
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<td>PowerPoint Tools</td>
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<td>Use of Discussion in the classroom</td>
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<td>* Microteaching presentations</td>
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Feb 09  Collaborative Learning, Active Learning  McKeachie Chs 16, 17, 19  
And other alternatives to Lecture  
Problem Based Learning (PBL)  Cantillion/Wood: Prob Based Learning  
Team Based Learning (TBL)  Team Based learning defined  
Merrill 5-Star  Merrill: 5-star  
Myers-Briggs/Student Learning style assessment  
In forming collaborative groups  
* Microteaching presentations  
*1st teacher observation write-up due! 

Feb 16  Instructor-Student Interactions  McKeachie Chs. 10, 13, 14, 18  
Dealing with student complaints and problems  Adams: Dead Grandmother synd.  
Requests for Student Recommendations – how to draft a good recommendation letter  Novak: Just in Time Teaching  
Teaching with Technology  Zuiker Teaching Statement  
Teaching philosophy statement  Murphy Teaching Statement  
CIC presentation by Katie Kearns, ISS:  
how to write an effective teaching philosophy  
* Microteaching presentations  

Block 3: COURSE CONSTRUCTION AND MECHANICS  
Feb 23  How to prepare a good syllabus  McKeachie Chs. 3, 4, 21  
How to select appropriate readings  Anderson & Bloom: Taxonomy for Learning  
Bloom’s and Anderson’s Taxonomies  
CIC Presentation by George Rehrey, ISS:  
Syllabus construction, Writing Course Goals and Course Objectives  
Evaluating and Selecting Texts for a course  
* Microteaching presentations  

Mar 02  Assessment of Students  McKeachie Chs. 7, 8, 9, 11  
Formative vs. Summative Assessment  Haladyna: Mlt Choice Guidelines  
Bloom and Anderson (continued)  Andrade: Teaching w/Rubrics  
How to write a good multiple choice exam  
How to assess critical thinking skills  
CIC Presentation by Katie Kearns, ISS: Developing Effective Grading Rubrics and Teaching  

Write up 2\textsuperscript{nd} instructor observation (use form on web)  
Write up a couple of sample Mlt choice questions that use lower & higher ends of Bloom’s taxon.  
Prepare teaching philosophy
Philosophy Revisited

*2nd instructor observation write-up due!

Mar 09  
(week 9) 
Classroom web page basics  
McKeachie Chs. 22, 23  
Cantillion: Web Based learning  
Prepare Course Syllabus  
Course Portfolio vs. Teaching Portfolio  
Hutchings: Course Portfolio  
Download Endnote vers. 10.0 for FREE  
CIC Presentation by Katie Kearns, ISS:  
Lewis: Effective Online Teaching  
Go to Peer Review of Teaching website  
What is a Teaching Portfolio?  
Evaluations of your teaching  
http://iuware.indiana.edu/list.aspx?id=54  
* Teaching Philosophy/Statement Due!  
and critique a course portfolio of your choice

Mar 16  
(week 10)  
Spring Break!  
While lounging on the beach, send instructors postcards.

Block 4: CLASSROOM RESEARCH AND THE SCHOLARSHIP OF TEACHING

Mar 23  
(week 11)  
What is Classroom Research?  
Boyer, Scholarship Reconsidered  
BRING COMPUTER TO CLASS  
Classroom Assessment Techniques  
Angelo and Cross, Ch 1, 3, etc  
Reviewing the Classroom Research/SOTL  
Literature Presentation by Moira Smith, Wells Librarian: How to do an Effective online search, 
Electronic Databases for classroom research 
literature, and using Endnote  
* Course Syllabus and description due!  
Presentation by Moira Smith, Wells Librarian: How to do an Effective online search, 
Electronic Databases for classroom research 
literature, and using Endnote

Mar 30  
(week 12)  
Classroom Assessment Techniques  
Downing: Reliability  
Formative vs. Summative Assessment in detail  
Kennedy & Lingaard: Grounded Theory  
Validity vs. Reliability  
How teaching evaluations may be used as assessment 
Presentation by David Perry, Director of Evaluation & Testing: Determining Reliability of Exams & Assessing Teaching Evaluations  
Qualitative vs. Quantitative forms of assessment  
Intro to Grounded Theory  
Basic statistical methods used in Classroom research

Apr 6  
Review of some of the SOTL literature  
O’Loughlin, How to SoTL  
Prepare draft of Teaching/Course Portfolio
12/21/06

(week 13)
Who funds classroom research and SOTL endeavors? O’Loughlin, JECT article
Students as Human Subjects in SOTL research
Presentation by Cybil Cole of IRB: How to draft an
IRB proposal for classroom research
* PRESENTATIONS of course syllabi

Apr 13
(week 14)
Critically evaluating the classroom
Research literature
What constitutes “rigorous” classroom research?
Presentation by Ken Pimple, Poynter Center:
Research Ethics and Human Subjects
* PRESENTATIONS of course syllabi
* ROUGH DRAFT of Classroom Research
Grant or Teaching/Course Portfolio due!

Apr 20
(week 15)
Introduction to Clinical Teaching
OSCEs and how they Assess learning
Discussion of sample classroom research
Articles brought in by students
Presentation by Katie Kearns: Consent
forms and Classroom Research
End-of-Semester Teaching/Learning Survey
* PRESENTATIONS of grant or portfolio
(5 min each)

Apr 27
(week 16)
What have you learned?
What makes a good instructor?
How to market yourself as a scholar of teaching in the
Academia job market
*FINAL version of Classroom Research grant
or Teaching/Course Portfolio due!
*PRESENTATIONS of grant or portfolio
(5 min each)