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

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| <b><u>Instructors:</u></b> Dr. Valerie O'Loughlin<br>Associate Professor of Anatomy<br>Jordan Hall 010A<br>855-7723<br><a href="mailto:vdean@indiana.edu">vdean@indiana.edu</a> | Dr. Mark Braun<br>Professor of Pathology<br>Jordan Hall 010<br>855-3131<br><a href="mailto:braunm@indiana.edu">braunm@indiana.edu</a> |
| 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:

1. McKeachie, W.J. (2006). Teaching tips: strategies, research and theory for college and university teachers. Boston, MA: Houghton Mifflin Company

Recommended texts include:

2. Angelo, TA and Cross, KP (1993) Classroom Assessment Techniques; San Francisco, CA: Jossey Bass Publishers.
3. National Research Council. (2001) How People Learn: Brain, Mind, Experience and School, Washington, D.C.: National Academy Press (entire book is online at: <http://newton.nap.edu/html/howpeople1/> or <http://darwin.nap.edu/books/0309070368/html/1.html>)

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**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



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Feb 09  
(week 5)

Collaborative Learning, Active Learning  
And other alternatives to Lecture  
Problem Based Learning (PBL)  
Team Based Learning (TBL)  
Merrill 5-Star  
Myers-Briggs/Student Learning style assessment  
In forming collaborative groups

McKeachie Chs 16, 17, 19  
Baptiste: Prob Based Learning  
Cantillion/Wood: Prob Based Learning  
Team Based learning defined  
Merrill: 5-star

**\* Microteaching presentations**  
**\*1<sup>st</sup> teacher observation write-up due!**

Feb 16  
(week 6)

Instructor-Student Interactions  
Dealing with student complaints and problems  
Requests for Student Recommendations – how  
to draft a good recommendation letter  
Teaching with Technology  
Teaching philosophy statement  
CIC presentation by Katie Kearns, ISS:  
how to write an effective teaching philosophy

McKeachie Chs. 10, 13, 14, 18  
Adams: Dead Grandmother synd.  
Teaching Philosophy Worksheets  
Novak: Just in Time Teaching  
Zuiker Teaching Statement  
Murphy Teaching Statement

**\* Microteaching presentations**

### **Block 3: COURSE CONSTRUCTION AND MECHANICS**

Feb 23  
(week 7)

How to prepare a good syllabus  
How to select appropriate readings  
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

McKeachie Chs. 3, 4, 21  
Anderson & Bloom: Taxonomy for  
Learning

Write up 2<sup>nd</sup> instructor observation  
(use form on web)  
Write up a couple of sample Mult  
choice questions that use lower &  
higher ends of Bloom's taxon.

**\* Microteaching presentations**

Mar 02  
(week 8)

Assessment of Students  
Formative vs. Summative Assessment  
Bloom and Anderson (continued)  
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

McKeachie Chs. 7, 8, 9, 11  
Haladyna: Mult Choice Guidelines  
Andrade: Teaching w/Rubrics

Prepare teaching philosophy

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Philosophy Revisited  
**\*2<sup>nd</sup> instructor observation write-up due!**

Mar 09  
(week 9)

Classroom web page basics  
Web Based Learning  
Course Portfolio vs. Teaching Portfolio  
CIC Presentation by Katie Kearns, ISS:  
What is a Teaching Portfolio?  
Evaluations of your teaching  
**\* Teaching Philosophy/Statement Due!**

McKeachie Chs. 22, 23  
Cantillon: Web Based learning  
Hutchings: Course Portfolio  
Lewis: Effective Online Teaching

Prepare Course Syllabus  
Download Endnote vers. 10.0 for FREE  
<http://iuware.indiana.edu/list.aspx?id=54>  
Go to Peer Review of Teaching website  
<http://www.courseportfolio.org/peer/pages/index.jsp>  
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?  
Classroom Assessment Techniques  
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!**

Boyer, Scholarship Reconsidered  
Angelo and Cross, Ch 1, 3, etc

**BRING COMPUTER TO CLASS**

Mar 30  
(week 12)

Classroom Assessment Techniques  
Formative vs. Summative Assessment in detail  
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

Downing: Reliability  
Kennedy & Linaard: Grounded  
Theory

Apr 6

Review of some of the SOTL literature

O'Loughlin, How to SoTL

Prepare draft of Teaching/Course Portfolio

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(week 13)

Who funds classroom research and SOTL endeavors?  
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**

O'Loughlin, JECT article

Or Grant application

<http://www.indiana.edu/~rcr/index.php>

Take online human subjects test and bring  
score to class next week

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!**

Carney: Educ. Epidemiology  
Pimple: Least to know  
Pimple: Research Ethics  
Pimple: Six Domains

Review literature, bring in and CRITIQUE  
classroom research article - email  
Class the abstract

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)**

Abbott: TA training  
Cantillion/Smee: Skill Based  
Assessment  
Searle: Why Invest in Educ.  
Fellow Program  
Steinert: Novice to Informed  
Educator

Prepare FINAL version of portfolio  
or grant

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)**

McKeachie Chs. 24, 25, 26  
Sternberg: Expert Student  
Boyle: Mentoring New Faculty  
Gruppen: Ed Fellow Themes