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Medical Sciences M620: Pedagogical Methods in the Health Sciences
Spring 2009

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Class days/times: Fridays, 1:30-4:30

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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Date	Topic(s)	Readings (<i>do prior to class</i>)	Assignments (<i>due the following week</i>)
Jan 16 (week 1)	INTRODUCTION Reviewing syllabi Profiles of the Typical Undergraduate Diversity in the Student Body Instructional Observation Directions What makes a good instructor? What makes a good course? Beginning-of-semester Teaching/Learning Survey	Godfrey: Training the Trainers Leoni: Fish is Fish How People Learn, Ch 1 (intro) McKeachie, Ch 1 (intro)	Write title and think about “fantasy course” (to be used throughout semester)
Block 1: STUDENT LEARNING STYLES			
Jan 23 (week 2)	Expert vs. Novice Learner Personal Learning Assessments Perry’s scheme of Intellectual Development Microteaching instructions	How People Learn, Ch 2 and 3 McKeachie, Ch 2 (countdown) Ross, the Expert Mind (for reference only) Perry Table 1.1, Intro, Glossary	Prepare Microteaching Session http://www.vark-learn.com/english/page.asp?p=questionnaire Take VARK test, print out your results Prepare list of student stumbling blocks
Jan 30 (week 3)	VARK Learning Styles Theory of Multiple Intelligences Students Pet Theories & Naïve Misconceptions in the Health Sciences Merrill 5 Star * Microteaching presentations	Fleming: VARK Savion: Pet Theories Merrill: 5 star Sarasin: Learning Style Perspectives	Revisit stumbling blocks list, write up ways to help students with these blocks
Block 2: TEACHING STYLES AND DELIVERY			
Feb 06 (week 4)	Lecture Format: Pros and Cons How to deliver an effective Lecture PowerPoint Dos and Don’ts Use of Discussion in the Classroom Discussing emotionally charged subjects * Microteaching presentations	McKeachie Chs 5, 6 Cantillion: Teaching Large Groups Craig: PowerPoint & Teaching Huston and DiPietro: In the Eye of the Storm Pace: Controlled Fission	Write up 1 st instructor observation. (use form on web) Do a short Myers-Briggs analysis (bring results to class next week) http://www.teamtechnology.co.uk/mmdi-re/mmdi-re.htm

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Feb 13
(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

* **Microteaching presentations**
* **1st teacher observation write-up due!**

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

Feb 20
(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

* **Microteaching presentations**

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

Block 3: COURSE CONSTRUCTION AND MECHANICS

Feb 27
(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

* **Microteaching presentations**

McKeachie Chs. 3, 4, 21
Anderson & Bloom: Taxonomy for
Learning (*for reference only*)

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

Mar 06
(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 Jo Ann Vogt, ISS and
Writing Tutorial Services: Developing

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

Prepare teaching philosophy

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Effective Grading Rubrics and how
to develop good science writing
***2nd instructor observation write-up due!**

Mar 13
(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 20
(week 10)

Spring Break!

While lounging on the beach, send
instructors postcards.

Block 4: CLASSROOM RESEARCH AND THE SCHOLARSHIP OF TEACHING

Mar 27
(week 11)

What is Classroom Research?
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
Basic statistical methods used in Classroom research
*** Course Syllabus and description due!**

Boyer, Scholarship Reconsidered
Angelo and Cross, Ch 1, 3, etc
Downing: Reliability

Download Endnote vers. 10.0 for FREE
<http://iuware.indiana.edu/list.aspx?id=54>

Apr 3
(week 12)

Classroom Assessment Techniques
Intro to Grounded Theory
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

Kennedy & Lingaard: Grounded
Theory

BRING COMPUTER TO CLASS

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Apr 10 (week 13)	Review of some of the SOTL literature Who funds classroom research and SOTL endeavors? Students as Human Subjects in SOTL research Presentation by <u>Sara Brand, IRB</u> : How to draft an IRB proposal for classroom research * PRESENTATIONS of course syllabi	O'Loughlin, How to SoTL O'Loughlin, JECT article	Prepare draft of Teaching/Course Portfolio Or Grant application http://www.indiana.edu/~rcr/index.php Take online human subjects test and bring score to class next week
Apr 17 (week 14)	Critically evaluating the classroom Research literature What constitutes "rigorous" classroom research? Presentation by <u>Ken Pimple, Poynter Center</u> : 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	Review literature, bring in and CRITIQUE classroom research article - email Class the abstract
Apr 24 (week 15)	Introduction to Clinical Teaching OSCEs and how they Assess learning Discussion of sample classroom research Articles brought in by students Presentation by <u>Katie Kearns</u> : 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
May 1 (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	