

# Professionalization and Pedagogy in Informatics

## I600

Class meets 2:30-5 p.m. Mondays  
SB 231

Office Hours: Tuesdays,  
1-3 p.m., 301 Informatics  
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### About the Course:

This course addresses a range of issues that you will confront as new and continuing teachers and professionals. Since most of you are preparing yourself for a life in academia, it seems fitting that you should prepare both a research dossier and a teaching dossier for entering your career. Some of you have already had classroom experiences. Others of you have yet to do any teaching. This course should help you think about the kind of teacher you want to be, helping you develop your own philosophy of teaching. It should also help you develop some skills in the more practical aspects of teaching, such as preparing a syllabus, designing an exam, and leading a discussion.

You have all been learners, even if you haven't had formal teaching experiences. And you have been learners in environments where you have been the beneficiary of excellent teachers as well as poor teachers. You may have sworn to yourself that you would never be like the worst of your teachers. So you have a lot of personal experience to draw on when approaching this class—experience that should be useful when reading the pedagogical literature, preparing your personal teaching module or drafting your first syllabus.

Because students in informatics are preparing themselves for a range of academic positions, we will try to focus on the special needs of bioinformatics, HCI, or security teaching experiences by inviting faculty in to discuss those teaching challenges.

Some of you, however will not be taking positions in academia—or at least do not plan an academic career. You should get something out of the part of this class that talks about preparation for teaching because it will help you understand yourself as a learner. You may also have an opportunity to do some teaching here before you leave the program. Teaching experiences do come in multiple forms, however. So even in industry you may have many opportunities to conduct workshops, present your research or teach other colleagues something you have discovered. I hope you can call on some of the experiences in this class to help you tackle these assignments.

I can't say that I myself am a master teacher or an expert in pedagogical method. Like most faculty, I do the best I can, trying to help students achieve the most they can. But also like most faculty, I fall short despite my best intentions. I've been doing this a long time and have had my share of successes and failures. My role is to help guide you to consider how to approach the teaching and professional careers that lie in front of you and not to accept the common classroom practices just because others have been using them for so long. This much I do know—there is no perfect teaching method for everyone. We all have to find our own way and develop the style that works best for us and for our students.

## **Texts for the Class:**

Wilbert J. McKeachie and Marilla Svinicki, *McKeachie's Teaching Tips: Strategies, Research, and Theory for College and University Teachers*. Twelfth Edition. Boston, New York: Houghton Mifflin, 2006.

Parker Palmer, *The Courage to Teach*. San Francisco: Jossey-Bass, 1998.

Other resources to be found on Oncourse or online.

Multiple teaching resources can be found at the IU Instructional Support Services web site: <http://www.indiana.edu/~teaching/allabout/pubs/#styles>

## **Assignments/Grading:**

Teaching philosophy (two versions). 20%

Report on Visit to a “master” teacher’s class (outside Informatics)  
And a visit to a class (inside Informatics) 10%

Teaching Module (involves both lesson plan and presentation) 20%

Sample syllabus for an undergraduate class in your field 15%

Paper on an issue related to teaching in your specific field 35%

## **Course Calendar**

**August 27. Getting to know one another. Introduction to the course. Great teachers you have known. What IU and other students in IT undergrad programs say about their teachers.**

### **September 3**

#### **Teaching vs. Learning: Two sides of the same coin?**

Read: Robert B. Barr and John Tagg, “From Teaching to Learning: A New Paradigm for Undergraduate Education.”

<http://critical.tamucc.edu/~blalock/readings/tch2learn.htm>

#### **Philosophy of Teaching:** <http://ftad.osu.edu/portfolio/philosophy/Philosophy.html>

This website offers a guide for preparation for writing your philosophy along with some examples. I suggest that you read through the guide and select a few (at least three) of the examples of actual statements. We will discuss those statements in class.

Read: D.J. Schonwetter, L. Sokal, M. Friesen, and K.L. Taylor, "Teaching Philosophies Reconsidered: A Conceptual Model for the Development and Evaluation of Teaching Philosophy Statements," *The International Journal for Academic Development* 7(1), 2002, 83-97.

Pgs. 2-8 in McKeachie text.

Chapters 1-3 in Palmer text.

Gabriel A. Montell, "What's your Philosophy of Teaching and Does It Matter?" *The Chronicle of Higher Education*, March 27, 2003.

<http://chronicle.com/jobs/2003/03/2003032701c.htm>

## **September 10—Teaching Philosophy Due**

### **Learning Styles—why students are not all the same.**

What's your style. Do Canfield's Learning Styles Inventory and score yourself.

<http://www.tecweb.org/styles/canfield1.html>

Read: Robert Loo, "Kolb's Learning Styles and Learning Preferences: Is there a Linkage?" *Educational Psychology* 24(1), 99-108.

Valerie L. Reese and Rita Dunn, "Learning-Style Preferences of a Diverse Freshmen Population in a Large Private, Metropolitan University by Gender and GPA," *Journal of College Student Retention* 9(1), 95-112, 2007-2008.

Robert J. Kloss, "A Nudge is Best," *College Teaching* 42(4), 1994, 151-159.

<http://web.ebscohost.com/ehost/detail?vid=1&hid=103&sid=cf310190-7a67-4197-8e24-7e9334c6306a%40sessionmgr107>

Kurz, Lisa, David Perry, & Ray Smith. Learning Activities of Bloomington Students: Report of an Online Survey, (Bloomington, IN: Instructional Support Services, 2004).

[http://www.indiana.edu/~deanfac/learning\\_study/learning\\_study.pdf](http://www.indiana.edu/~deanfac/learning_study/learning_study.pdf)

Palmer, chapters 4 and 5. Learning in Community.

### **Practical Issues: Applying for an Academic Position—the application letter**

Bob Port, "Open Letter for a Job Candidate,"

<http://www.cs.indiana.edu/~port/advice.letter.html>

Eleanor H. Green, "The Job Search: Observations of a Reader of 177 Letters of Application," *ADE Bulletin*, 113, 1996, [http://www.mla.org/cgi-shl/docstudio/docs.pl?bulletin\\_113050](http://www.mla.org/cgi-shl/docstudio/docs.pl?bulletin_113050)

Jonathan Dantzig, “Landing the Academic Job: The Process and the Pitfalls,” May 2, 2007, Dept. Of Mechanical Science and Engineering, University of Illinois. [http://quattro.me.uiuc.edu/~jon/ACAJOB/Latex2e/academic\\_job.pdf](http://quattro.me.uiuc.edu/~jon/ACAJOB/Latex2e/academic_job.pdf)

Also read: <http://www.hu.mtu.edu/~hlbostic/TipsWritingCoverletters.htm>  
<http://www.hu.mtu.edu/~hlbostic/GPD%20job%20letter%20example%201.htm>  
<http://www.hu.mtu.edu/~hlbostic/GPD%20job%20letter%20example%202.htm>

<http://www.cis.upenn.edu/~sweirich/resources.htm>  
<http://pag.csail.mit.edu/~mernst/advice/academic-job.html>

**September 17. Master Teacher Review Due**  
**Preparing to Teach—Before you start. . .and the first day.**

Mckeachie, chapter 2 and 3

Altman, Howard B., & William E. Cashin. “Writing a Syllabus.” *IDEA Paper*, 27 (Sept. 1992). [http://www.idea.ksu.edu/papers/Idea\\_Paper\\_27.pdf](http://www.idea.ksu.edu/papers/Idea_Paper_27.pdf)

UCSC’s Teaching Toolbox, “Writing a Syllabus,” <http://teaching.ucsc.edu/tips-syllabus.html>

Hans Gutbrod, “The Syllabus as Contract and Strategy—All You Really Need to Know,” Draft 2  
<http://www.tsu.ge/qa/materialseng/SyllabusasStrategyandContract.pdf>

Julie C. Stout, “Radical Course Revision: A Case Study,” *The National Teaching and Learning Forum*, 10(4), May 2001.  
[http://www.ntlf.com/html/pi/0105/revision\\_1.htm](http://www.ntlf.com/html/pi/0105/revision_1.htm)

Should I use a Web-based Course Package like Oncourse?

Read: Julio C. Rivera and Margaret L. Rice, “A Comparison of Student Outcomes and Satisfaction between Traditional and Web-based Course Offerings,” <http://www.westga.edu/~distance/ojdla/fall53/rivera53.html> *Online Journal of Distance Learning Education*, 2002.

M.A. Storey, et al., “Evaluating the usability of Web-based Learning Tools,” 2002 <http://web.mit.edu/16.459/www/Weblearn1.pdf>

Ibrahim Abdalla, “Evaluating Effectiveness of E-Blackboard System Using TAM Framework: A Structural Analysis Approach,” *AACE Journal* 15(3), 2007, 279-287.

Erin E. Hardin, "Presentation Software in the College Classroom: Don't Forget the Instructor," *Technology in Teaching* 34(1), 2007, 53-57.

Presentation by Prof. Claude Cookman, School of Journalism, and Michael Lyons, doctoral student in Mass Communications, on Just-in-Time Teaching (4 p.m.).

**September 24. Preparing CVs, teaching dossiers. Also leading discussions and lecturing and the role of PowerPoint.**

Read: Margaret Newhouse, "From CV to Resume," Chronicle Careers, *Chronicle of Higher Education*, Dec. 3, 1999.  
<http://chronicle.com/jobs/99/12/99120301c.htm>

Sample annotated Vita from Preparing Future Faculty at Indiana University  
[http://www.indiana.edu/~pffcep/vita\\_example.html](http://www.indiana.edu/~pffcep/vita_example.html)

"Building a Teaching Dossier for Tenure and Promotion." Dean of Faculties, Indiana University.

Chapters 5 and 6 in McKeachie.

Catherine Middleton, "Illusions of Balance and Control in an Always On Environment: A Case Study of Blackberry Users," *Continuum*, 21(2), 2007, 165-178.

Jared Sandberg, "Death by PowerPoint," *The Globe and Mail*, Nov. 17, 2006, p. C9.

Matthew A. Christian, "Preventing Death by PowerPoint or Twelve Steps to Better E-Presentations," Aug. 30, 2002.

Edward Tufte, "PowerPoint is Evil: Power Corrupts, PowerPoint Corrupts Absolutely," *Wired* September 2003,  
<http://www.wired.com/wired/archive/11.09/ppt2.html>

"The Elephant Not in the Room," *Inside Higher Education*, May 1, 2007, 1-5.

Chapter 18, McKeachie.

**October 1. Professionalization and the Professional Organization. Review of Informatics Teacher Due.**

Panel Discussion by Faculty Experts on the value of the Professional Organization—Prof. Bill Aspray and Prof. Kay Connelly.

Read: Lauren Keller Johnson, “Rethinking Company Loyalty,” *Working Knowledge for Business Leaders*, Harvard Business School, Sept. 19, 2005, <http://hbswk.hbs.edu/item/5000.html>

Virginia Valian, “Power, Effectiveness and Gender,” February 2006, <http://www.hunter.cuny.edu/genderequity/equityMaterials/Jan2007/urpower.206.pdf> Also see materials by Valian on this web site: <http://www.hunter.cuny.edu/genderequity/equitymaterials.html>

Gloria Miller, “The Frontier, Entrepreneurialism and Engineers: Women Coping with a Web of Masculinities in an Organizational Culture,” *Culture and Organization*, 8(2), 2002, 145-160.

“Strategic Approaches to Work/Life Balance,” *Worklife Report*, 13(1), 2000, 8-9.

JoEllen Moore, “One Road to Turnover: An Examination of Work Exhaustion in Technological Professionals,” *MIS Quarterly*, 24(1), 2000, 141-168.

Also some discussion of collaborative learning environments.

Read: The documents linked to from Team-Based Learning, a University of Oklahoma site. <http://www.ou.edu/pii/teamlearning/materials.htm>

Laurie Williams, et al., “On the Impact of Collaborative Pedagogy on African-American Millennial Students in Software Engineering,” *Proceedings of the 29<sup>th</sup> International Conference on Software Engineering*, 2007, 677-687

McKeachie, Chapter 16.

Barbara J. Millis, “Enhancing Learning—and More!—Through Cooperative Learning,” Idea Paper #38, October 2002, [http://www.idea.ksu.edu/papers/Idea\\_Paper\\_38.pdf](http://www.idea.ksu.edu/papers/Idea_Paper_38.pdf)

**October 8. Peer Teaching, Grading and Testing. Teaching the Undergraduate Introductory Class and Teaching in a Studio Environment. Sample Syllabus Due.**

Presentation by Prof. Suzanne Menzell on peer teaching in the computer programming class.

Presentation by Prof. Memo Dalkilic on designing and teaching the large introductory course in Informatics.

Presentation by Prof. Erik Stolterman on teaching in a studio environment.

Read: Large Classes FAQ. IU Campus Instructional Consulting,  
<http://www.indiana.edu/~teaching/allabout/faq/large.shtml>

“Teaching Large Classes,” Professional Development for Geoscience Faculty, Carleton University,  
<http://serc.carleton.edu/NAGTWorkshops/earlycareer/teaching/LargeClasses.html>

McKeachie, Chapters 7,8, 11.

Lucy C. Jacobs, “How to Write Better Tests: A Handbook for Improving Test Construction Skills,” IUB Evaluation Services & Testing,  
[http://www.indiana.edu/~best/write\\_better\\_tests.shtml](http://www.indiana.edu/~best/write_better_tests.shtml)

Marilla D. Svinicki, “Helping Students Understand Grades,” *College Teaching*, 46(3), 101-106.

### **October 15. Teaching Evaluations and Teaching Assessment**

Marie-Line Germain and Terri A. Scandura, “Grade Inflation and Student Individual Differences as Systematic Bias in Faculty Evaluations,” *Journal of Instructional Psychology*, 32(1), 2005, 58-67.

David C. Munz and Haley Munz, “Student Mood and Teaching Evaluations,” *Journal of Social Behavior and Personality*, 12(1), 233-242.

Eyal Gamliel and Liema Davidovitz, “Online versus Traditional Teaching Evaluation: Mode Can Matter,” *Assessment & Evaluation in Higher Education* 30(6), 2005, 581-592.

Robert E. Wright, “Student Evaluations of Faculty: Concerns Raised in the Literature and Possible Solutions,” *College Student Journal*, 1006, 40(2), 417-422.

AAHE, “9 Principles of Good Practice for Assessing Student Learning,” 1996,  
<http://ultibase.rmit.edu.au/Articles/june97/ameri1.htm#9>

Michael J. Strada, “Assessing the Assessment Decade,” *Liberal Education*, 87(4), 2001, <http://www.aacu.org/liberaleducation/le-fa01/le-fa01feature2.cfm>

A. B. Ellis, C.R. Landis and K. Meeker, "Classroom Assessment Techniques: Conceptests," Read this page and linked pages at the bottom.

<http://www.flaguide.org/cat/contests/contests1.php>

**October 22. Multicultural Students. Also focus on networking and mentoring.**

Issues for Teaching in a Multicultural Environment (4 p.m.) Prof. Raquel Hill

McKeachie, Chapter 13.

Christine L. Ogan and Jean C. Robinson, "The Only Person Who Cares': Misperceptions of Mentoring Among Faculty and Students in IT Programs," Unpublished manuscript, May 2007.

"Web Networking Boom Blasts into the Workplace," *CIO Insight*, Aug. 3, 2007, 1-2.

Lisa LaMotte, "How to Network Like a Pro Online," *Forbes.com*, Aug. 9, 2007, 1-2

**October 29. NSSE and IU Student Profiles.**

Presentation by representative from the National Survey of Student Engagement (located in the IU School of Education).

Read the Executive Summary and the demographic results, benchmarks for the 2006 Survey at [http://nsse.iub.edu/NSSE\\_2006\\_Annual\\_Report/results.cfm](http://nsse.iub.edu/NSSE_2006_Annual_Report/results.cfm)

Maureen E. Wilson, "Teaching, Learning and Millennial Students," *New Directions for Student Services*, 106, 2004, 59-71.

**November 5, 12, 19. Presentation and Class Critique of Teaching Modules. Lesson Plan for Class Due when Presentation Given.**

**November 26 Teaching Ethics/Ethics of Teaching**

Visiting speaker, Prof. Kalpana Shankar.

Read: 325-342 in McKeachie and Svinicki text.

Patricia Y. Logan and Allen Clarkson, "Teaching Students to Hack: Curriculum Issues in Information Security," SIGCSE, February 23-27, St. Louis, 157-161.

Shifra Baruchson Arbib and Eti Yaari, "Printed versus Internet Plagiarism: A Study of Students' Perception," *Journal of Information Ethics*, 1, June 2004, pp. 1-7.

Elizabeth Buchanon, "Ethics in Library and Information Science: What Are We Teaching?" *International Journal of Information Ethics*, Spring 2004, 51-62.

Pat Hutchings, "Competing Goods: Ethical Issues in the Scholarship of Teaching and Learning," *Change*, 5(5), 2003, 26-33.

**December 3. No Class—work on your final papers; Turn in Revised Philosophy of Teaching paper.**

**December 12. Final Papers Due**