

**Indiana University**  
**School of Informatics – Computer Science Department**  
**B599 – Teaching in Computer Science**

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**Course Information**

Semester: Fall 2005  
Meetings: Tuesdays, 5:30 pm – 6:45 pm, LH102  
Instructor: Eric L. Kisling  
Office: Lindley Hall 225B  
AI: Gate Jantaraweragul  
Office: Lindley Hall

**Course Description:**

This course is about general principles of teaching and practical experiences that relate to teaching computer science. An important feature of the course is the micro-teaching, in which each participant prepares and delivers short lectures to the seminar participants. Each presentation is followed by critical analysis and discussion.

First, we will learn about teaching as a whole and how it applies in computer science and the sciences. You will come to find that teaching in computer science is much different from teaching in the humanities. We will see how communication plays an integral role in the success of both teacher and student.

We will also assess ourselves on how we do teach. You will keep a teaching journal that reflects your own abilities in the classroom from both a self and managerial position. You will also write a pedagogy paper about a topic that directly relates to yourself. You will research about a topic that you choose that will enable you in future semesters. We will finally look at various aspects of teaching and how computer science can improve if we were in charge of how teaching was done!

In this course, we will investigate pedagogy as a social and technological phenomenon, focusing on the ways in which computer scientists are making use of technology, lecture halls, laboratories, and other areas that learning can take place. With this background, you will have an opportunity to play an active role in discussing what true science teaching is and why it is difficult to master. You will be in a position to evaluate the role you and your fellow peers will play in being the future instructors of students at a research institution. In doing so, you will help move all of us toward better learning in the science classroom.

The purpose of this course is to explore pedagogy in two ways. First, there will be an emphasis on developing a knowledge base and set of skills that will enable you to efficiently and effectively understand what teaching is and what learning is. You will be able to apply this information in your own classroom.

Second, we will explore the pedagogy process. This facet of the course will include:

- The basics of teaching and learning
- The relationship between information to be taught and the method in which it is presented; and
- The discussion of a broad range of topics about pedagogy that you will be able to ponder and adopt if you choose.

### **Learning Objectives:**

Upon completion of this course, you should be able to:

- **execute** a five minute presentation to an audience where you present a concept that is to be learned;
- **identify** basic principles of teaching and learning,
- **understand** the applications of pedagogy in various classroom settings;
- **understand** the relationship between the practice of teaching and the organizational, social, and technical contexts of learning;
- **apply** what you have learned about pedagogy in a last micro teaching; and
- **discuss** knowledgeably what teaching, learning, and training are in a science environment.

### **Textbooks:**

- Brinkley, A., et al. (1999). *The Chicago Handbook for Teachers: A Practical Guide to the College Classroom*. Chicago: The University of Chicago Press.

### Course Schedule and Readings by Week:

Week	Class Description	Readings & Projects
Week 1. (08/30/05)	Introduction Discussion of questions raised about article	Article on CS being a trade, submission of discussion question.
Week 2. (09/06/05)	Micro Teaching introduction and assignments	N/A
Week 3. (09/13/05)	Micro Teachings in LH102; LH025, BH108	Micro Teachings
Week 4. (09/20/05)	Discussion of ethics in teaching and assignment of chapters 3 & 4 from course text	N/A
Week 5. (09/27/05)	Discussion of discussion and lecturing	Discussion Question from Ch 3 and one from Ch 4
Week 6. (10/04/05)	General information on Pedagogy paper; final overview of lectures and discussions, assignment of new article on teaching	N/A
Week 7. (10/11/05)	Discussion of Ch 9 and article	Discussion questions for article and Ch 9 from course text
Week 8. (10/18/05)	Active learning; Assignment of assessment topics – chapters 5 & 6 from text	N/A
Week 9. (10/25/05)	Discussion of assessment mentalities; Assignment of evaluation – chapters 7 & 8 from text	Discussion questions from Ch 5 & 6 from course text
Week 10 (11/01/05)	Evaluations – What do they mean?; Assignment of evaluation – chapter 10 from text	Discussion questions from Ch 7 & 8 from course text
Week 11 (11/08/05)	Electronic tools – should we really use them in the classroom?	Discussion question from Ch 10 from course text
Week 12. (11/15/05)	Free for all – Discussion of issues not covered to this point; Self assessment.	
Week 13. (11/22/05)	<b>No Class - Thanksgiving</b>	
Week 14. (11/29/05)	Micro Teachings	Micro Teachings; Pedagogy Paper
Week 15. (12/06/05)	Micro Teachings	Micro Teachings
Week 16 (12/13/05)	Micro Teachings	Micro Teachings

## **Requirements:**

To receive a passing grade in this course, you must turn in all of the assignments and the pedagogy paper and complete any and all micro teachings. You cannot pass this course without doing all of the assigned work (which includes the final micro teaching), however, turning in all of the work is not a guarantee that you will pass the course.

Grades of **I** (Incomplete) may be assigned in this course after discussion with the instructor. However, depending on the circumstances, there will be a penalty applied at the discretion of the instructor.

All papers and assignments must be submitted on the dates specified in this syllabus. If you cannot submit an assignment or cannot deliver a presentation on the date it is due, it is your responsibility to discuss your situation with me in advance (see the turn-in policy). Given that your reasons or problems are legitimate, arrangements for the completion of the outstanding work can be made; this will occur at the discretion of the instructor.

## **Course Deliverables and Grading:**

Readings will typically be assigned for each class period, and the latest information about readings will be listed on the class website. Please come prepared to discuss the readings that are assigned. Class discussions are important, and I expect *ALL* students to participate.

ASSIGNMENTS	DESCRIPTION	% OF FINAL GRADE
1	First Micro Teaching	15%
2	In Class Minute Papers	10%
3	Pedagogy Paper	20%
4	Discussion Questions	15%
5	Last Micro Teaching	20%
6	Teaching Journal	20%

## **Academic Dishonesty:**

There is extensive documentation and discussion of the issue of academic dishonesty here in the Indiana University "Code of Student Rights, Responsibilities and Conduct". Of particular relevance is the section on plagiarism:

### **3. Plagiarism**

A student must not adopt or reproduce ideas, words, or statements of another person without appropriate acknowledgment. A student must give credit to the originality of others and acknowledge an indebtedness whenever he or she does any of the following:

- a. Quotes another person's actual words, either oral or written;
- b. Paraphrases another person's words, either oral or written;
- c. Uses another person's idea, opinion, or theory; or
- d. Borrows facts, statistics, or other illustrative material, unless the information is common knowledge.

From: [http://campuslife.indiana.edu/Code/Part\\_3all.html](http://campuslife.indiana.edu/Code/Part_3all.html)

Indiana University and the School of Informatics, Department of Computer Science policies on academic dishonesty will be followed. Students found to be engaging in plagiarism, cheating, and other types of dishonesty will receive an **F** for the course. As a rule of thumb, when in doubt, cite the source!

## **Course Policies:**

### ***On honor and collaboration:***

Course assignments are designed to help you build professional and practical experiences in teaching. You are encouraged to help each other throughout this course, discussing readings and your teaching journals, and contemplating issues that are raised in class. However, the work you submit must be your own. Any student who submits work completed by someone else will receive a 0 score for that assignment, and may receive an F for the course.

***On Attendance:***

Attendance is required. If, for some catastrophic reason, you are unable to attend, it is your responsibility to let me know beforehand and/or as soon as possible afterwards. You may email your information. If you miss a class it is your responsibility to:

- Hand in all assignments due for that day on time and
- Obtain any notes and handouts from other students.

I will take points off your final grade for each missed class.

***On interactions with the instructor:***

I will be around during office hours. If office hours do not work for your schedule, you can make appointments. At other times, whenever my door is open, please feel free to knock and enter.

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Syllabus last updated: January 6, 2006  
Comments: [ekisling@cs.indiana.edu](mailto:ekisling@cs.indiana.edu)  
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