

\*\*\* Course Overview \*\*\*  
**INFO 782: Issues in Informatics**  
Fall 2010 (September 20-December 3) online  
Professor Gerry Stahl  
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## Course Description

INFO 782 examines recent developments in a selected informatics area as a case study. It focuses on research results and leading edge application of information technology in practice. It helps students prepare for success in information science and technology fields. It addresses issues and methods for maintaining technical knowledge throughout a professional career.

When you have completed this course, you should be able to:

- Understand the rate and nature of change in the informatics field.
- Maintain technical knowledge throughout a professional career in an informatics field.
- Understand and discuss recent developments in the case-study topic.

The course this quarter will focus on: “**Studying Virtual Math Teams**”. The selected area of informatics is Computer-Supported Collaborative Learning (CSCL), specifically how to support online small groups of high school math students. The case study analyzes various components of a leading-edge CSCL research project. The course will cover many aspects of research in information science and will involve students in extending the research through critical thinking, discussing and writing.

Within CSCL, the theory of *knowledge building* stresses that knowledge emerges through collaborative processes of continual refinement. The 28 essays to be read in the course each evolved through many stages: early drafts, conference papers, journal articles, dissertations, book chapters. They received feedback at a workshop during the CSCL 2007 conference, during online critiquing sessions and through critical editing. While each essay was carefully polished for publication, every one can still be criticized from multiple perspectives; no knowledge-building text—from Plato’s to Einstein’s—is ever final. In this course, we will be trying to refine and extend the ideas in these essays. Each student will gradually focus on a set of ideas that builds new knowledge on the basis of the course readings and will propose, draft and revise a research paper presenting this new knowledge. The course work is all designed to support this collaborative and individual knowledge building. Think about how everything you do in this course can help to prepare your own contribution to the course knowledge building, your final paper.

This seminar will introduce current research and theories of informatics. It will draw on a new book on a major research project taking place at the iSchool @ Drexel. The book reports on research during the period 2002-2009 directed by the course instructor; the Virtual Math Teams (VMT) Project is still ongoing. The VMT Project is the largest research project undertaken at the iSchool. It received about \$3,000,000 in federal funding. The book about it was published a year ago and has just come out in paperback. The book covers a broad variety of aspects of the research project. We will be reading and critiquing the entire book this quarter and will try to advance the ideas presented in the book. Students should buy the paperback version. In addition, an electronic version will be downloadable from the course Blackboard site. The electronic version will facilitate searching and the paperback version will facilitate reading, browsing and annotating.

The course will look at information systems for group use as *computational artifacts*, as *collaboration media* and as *informational resources*. It will consider educational, psychological, technological, communication and research aspects. No previous knowledge about these approaches will be required.

The course will be organized in seminar style. Students will prepare presentations on the readings, working in online small groups. Critical, creative, well-grounded perspectives on the readings are encouraged. The course will work toward the writing of research papers that build new knowledge on topics related to the research in the book.

The course is a graduate-level seminar course. It requires careful reading of 50-75 pages a week of research literature. It requires writing critical reviews of the readings and the composition of a publishable research paper. Most communication will take place *asynchronously* in Blackboard, but about one hour per week of *synchronous* collaboration within a small group of students is also required—small groups will be formed based primarily upon when each student can meet online.

This one-time course offering may not be repeated in the future. The content and instructor of this course change each time it is offered. This is an opportunity to discuss the instructor’s own perspective on informatics research.

## Course Textbook

The course content is presented by the readings. Students are expected to read them carefully, take notes and be critical. The reading assignments are listed in the Course Assignments table below. The book that you must purchase and download is:

- Stahl, G. (2009). *Studying virtual math teams*. New York, NY: Springer.

## Course Assignments

Week	Dates	Readings	Group Reviews	Comments	Assignments
1	Sept 20-26	1, 2, 3, 4, 5			
2	Sept 27- Oct 3	6, 7	1, 2, 3, 4 or 5		
3	Oct 4-10	8, 9, 10	6 or 7	1, 2, 3, 4, 5	
4	Oct 11-17	22, 23, 25	8, 9 or 10	6, 7	
5	Oct 18-24	19, 20, 21	22, 23 or 25	8, 9, 10	Group VMT exercise Abstract for paper
6	Oct 25-31	24, 26	19, 20 or 21	22, 23, 25	
7	Nov 1-Nov 7	11, 12, 13, 14	24 or 26	19, 20, 21	Draft of paper
8	Nov 8-14	15, 16, 17, 18	11, 12, 13 or 14	24, 26	Feedback on papers by group
9	Nov 15-21	27, 28	15, 16, 17 or 18	11, 12, 13, 14	
10	Nov 22-28		27 or 28	15, 16, 17, 18	Final version of paper
11	Nov 29-Dec 5			27, 28	
12	Dec 6-10				No exam

**Due dates:** All course assignments are due by midnight (East Coast time) on Sunday at the end of the week shown on the table of Course Assignments.

## Course Requirements

**READINGS:** Read the assigned chapters carefully by the end of the week—do not fall behind the schedule of readings above. Take notes. Think about the main purpose of each chapter and its central points. How does it make its argument to support its main points? What terms, concepts, ideas, techniques or arguments are unclear? Is the argument of the chapter supported by data and analysis of the data? How could the chapter be improved?

**GROUP REVIEWS:** Meet with your group online to draft a review of the chapter assigned to your group. You might want to each post ideas for the review to a group asynchronous space in advance of meeting; then meet synchronously for about an hour to discuss how to put the ideas together and to develop them further; then polish the review and agree on it as a group asynchronously; and finally post it to the Blackboard discussion forum by the end of the week listed above for the group review. Be concise and to the point: your group reviews should be 400-500 words long; they should state the main idea or argument of the reading and should point out its value and its limitations; suggest some ways the chapter could be improved or its argument could be strengthened. What is the chapter trying to accomplish—within the book and within the CSCL scientific community; how does its rhetorical and literary style help or hinder this? Do not simply state opinions; back up your claims or arguments with references to the data or to the detailed wording of the chapter.

**COMMENTS:** Read the reviews of the chapters that your group did not review last week. Post a comment of about 100-200 words long to the Blackboard discussion forum by the end of the week. Do not simply agree or disagree with the review; do not simply give your personal opinion or talk about your personal experiences. Be specific and reference the claims you are disputing. Try to deepen the discussion of the chapter by extending the argument of the chapter, the review and other people's comments. Some of the chapters are difficult and require background knowledge that not everyone will have; try to fill in some understanding of the chapter that you think was missing in the other postings on the chapter.

**GROUP VMT EXERCISE:** Meet with your group online at an agreed upon time in your assigned VMT chat room. Do not read or work on the topic until all your group members are ready to work together on it. Discuss the mathematical Topic given in the chat room for about an hour. Discuss your approach and each step in the chat – do not divide up the work and do it individually. The VMT Lobby is at <http://vmt.mathforum.org/VMTLobby>. You have already been registered as a member of the “INFO782” community. Your username is the concatenation of your first and last names (e.g., the user name for John Smith would be “john\_smith”). The usernames are not case sensitive. Your initial password is “INFO.” You can edit your account by using the *Edit Profile* tab on the *My Profile* page.

**ABSTRACT FOR PAPER:** Decide on a concept for your term paper, based on extending the research in one or more of the course readings. Be creative and select a concept that you are excited about and feel is important. What are your topic, claim, related literature, theory, data, method, findings? Submit an abstract of about 200-300 words. This is an individual assignment and should be posted to the Blackboard discussion forum by midnight on Sunday, October 24. You can post a preliminary version earlier to get feedback and you can revise your abstract later, but you must have an abstract posted by the deadline.

**FIRST DRAFT OF PAPER:** Submit a draft of a research paper of about 5 single-spaced pages. Write this as a research paper that could be submitted to a CSCL conference or another information science research conference. How are you building on course readings? What are your topic, claim, related literature, theory, data, method, findings? Follow the instructions and formatting in term\_paper\_template.doc. This is an individual assignment and should be uploaded as an attachment to your abstract by midnight on Sunday, November 7.

**FEEDBACK ON GROUP PAPERS:** Read the first drafts by the members of your group. Post a review of each draft to the Blackboard discussion forum for the abstract of the draft. Your reviews should each be about 200-300 words long and should provide specific suggestions on how the author can improve the paper and strengthen its argument and findings. Support the work of your peers and help them improve their drafts.

**FINAL VERSION OF PAPER:** Submit a final version of a research paper of about 5 single-spaced pages. Take carefully into account the suggestions in the reviews by your classmates. This is an individual assignment and should be uploaded to the Dropbox by midnight on Sunday, November 28. Save your final paper in Word format, using your last name in the file name, e.g., *stahl-final.doc*. The paper must include an Acknowledgments section that includes the following certification: “I (We individually) certify that: To the best of my (our) knowledge, this assignment is entirely work produced by me (us). Any identification of my individual (our group) work is accurate. I (we) have not quoted the words of any other person from a printed source or a website without indicating what has been quoted and providing an appropriate citation. I (we) have not submitted any of the material in this document to satisfy the requirements of any other course.”

## Course Grading

Grading will be based partially on your individual participation in the course and in your group; partially on the work of your group; and partially on your final paper.

Because your class mates will be building on your ideas, it is essential that you post all your assignments on time and that you participate actively in all group activities (both asynchronous and synchronous). Grades will be reduced at least in half for assignments submitted after the deadline.

Grading is *not* curved: We are trying to build knowledge collaboratively. It is possible for all groups and even all individuals to earn an A in this course. The grading is not competitive, but simply acknowledges the work that you have done on schedule. Most students who take an honest interest in the course and exert reasonable effort in *all* aspects of the course can receive an A. Failure to do your share in your group work, or to meet deadlines for postings and assignments will lower your grade. Your grade should be a measure of what your group and you have accomplished in this course.

#	points	max		A+	98	100
9	4	36	Group review	A	92	97
19	1	19	Comments on reviews	A-	90	91
1	4	4	Group VMT exercise	B+	88	89
1	5	5	Paper abstract	B	82	87

1	10	10	Paper draft		B-	80	81
4	4	16	Feedback on group papers		C+	78	79
1	10	10	Final version of paper		C	72	77
					C-	70	71
		100	Total possible points		D+	68	69
					D	62	67
					D-	60	61
					F	0	59

## Generic Information

**Problems & Questions.** Please raise questions in the class discussion board if possible. This is the best place to raise questions because other students may have the same question and they can benefit from seeing the answer; also, other students can respond with their views on the issue. If it is an urgent or personal problem, email the instructor. If you believe that your group assignment is not going to work out, discuss it with the instructor by email. Email with the instructor is the best medium for confidential concerns, such as concerns about other students in your group or personal events that will interfere with your course work.

**No Excuses.** No one is interested in excuses. If you need to miss any group activity, notify the instructor and the other members of your group as soon as possible and explain how you will contribute to the group. You are responsible for doing your share of the group work during the term; when you ask others to cover for you, let them know how you will make up for it. Everyone knows that things come up, sometimes unexpectedly, but that does not relieve you of your responsibilities. Your group is your support system in the course – let them know what is going on so they can help you.

**Plagiarism.** Obviously, plagiarism is not tolerated at Drexel and can result in failure. Plagiarism is passing off someone else's ideas, work or words as your own. Collaboration is encouraged, but always give credit to individuals or groups whose ideas, work or words you are reporting, quoting or summarizing.

**Academic Honesty.** Cheating, academic misconduct, plagiarism and fabrication are serious breaches of academic integrity and will be dealt with according to University Policy (Section 10 of the Student Handbook.) Students are responsible for their own finished work. Penalties for first offenses range from 0 on an assignment to an F in the course. All offenses are reported to the University Office of Judicial Affairs.

**Late Policy.** All group assignments are due online by midnight (East Coast time) of the due date. Group presentations cannot be rescheduled. Individual written work is due by Blackboard Dropbox to the instructor by midnight of the due date. Grades for late work will be lowered substantially.

**Student Advisors and Resources.** Take advantage of the academic advisors who are available on the third floor of Rush. Appointments with advisors can be scheduled by calling 215-895-2474. Appointments with co-op coordinators can be scheduled by calling 215-895-2185. The Drexel Learning Center is available at <http://www.dlc.drexel.edu>. The Writing Center is available at <http://www.drexel.edu/writingcenter>. The Hagerty Library is available at <http://www.library.drexel.edu>.

**Special Needs Students.** If you have any special need that must be accommodated, please let the instructor know the first week of class. Contact with the Office of Disability Services (215) 895-2506/7) is strictly confidential.

## Privacy Notice

In general, all work and communication in this course should be treated as *public*:

- Your work in this course may be studied by other students in the course.
- Any communication on the Internet may end up being seen by people for whom it was not originally intended.

- The web spaces for this course can be viewed by anyone in the world through the Web.
- ISchool courses may be recorded and streamed for educational purposes. Presentations and other activities in class may be videotaped and made available in the future.
- The instructor and other Drexel faculty, students and staff may have access to anything in Blackboard or the web spaces.
- Future researchers may have access to these materials as data. Although they do not have permission to publish any data about you and although they should ensure anonymity and confidentiality of all personal data, you should assume that activities taking place in this course may be subject to viewing.
- Students in future courses may have access to your work.

Please let the instructor know if you have an objection to your work being made available to others.

## Instructor's Background

Hi. My name is Gerry Stahl. I am always available by email at [Gerry.Stahl@drexel.edu](mailto:Gerry.Stahl@drexel.edu). Send me an email if you want to meet with me in person or to inquire about urgent or personal questions.

My professional research area is the field of CSCL (Computer-Supported Collaborative Learning). I think that collaborative learning is an exciting and especially effective way to learn. I believe that there is great potential to design good computer support for it. I have been experimenting with a number of CSCL prototypes and have written many papers on the theory, design and evaluation of interactive systems to support collaborative learning. We will be taking advantage of what I have learned from my research in this course, and I hope you will benefit from this.



In 2006 I published a book on CSCL entitled *Group Cognition: Computer Support for Building Collaborative Knowledge* and launched the *International Journal of Computer-Supported Collaborative Learning*. In 2009 I published a book on the VMT Project that I direct at the iSchool @ Drexel. I have published over 200 conference papers, journal articles, book chapters and essays. My background is in computer science and philosophy. At Drexel, I teach mainly HCI courses; before coming to Drexel, I worked at a large research organization in Germany; before that I was a Research Professor at the University of Colorado in Boulder. The 2002 international CSCL conference was at Boulder and I was the Program Chair for it; I have been in charge of workshops at CSCL 2003 in Norway, CSCL 2005 in Taiwan, ICCE 2006 in Beijing, CSCL 2007 in New Brunswick and CSCL 2009 in Greece; I am a Program co-Chair for CSCL 2011 in Hong Kong.

Let me know if you have any questions about my background or check out my home page, where you can see more details and read my papers: <http://GerryStahl.net>. You can download my reflections on "A Career in Informatics" at: <http://GerryStahl.net/personal/career.pdf>.