Syllabus: CECS 6000.001
Philosophy of Computing in Education
University of North Texas
[Syllabus modified based on previous teaching by Dr. Gerald Knezek]

Hybrid Course ● Matthews Hall 308 ● Monday, 5:30pm – 8:20pm ● 3 credits

Instructor:
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Office Hours:
• Tuesdays and Thursdays 10am – 12noon
• By appointment
• Email any time and expect a response within 48 hours
• Virtual Office Hours: Mondays 7:30pm – 8:20pm when class is not in session

Course Overview and Description
Catalog Description: An examination of the philosophical underpinnings of use of computers in education: why we are interested in this technology; what we hope to accomplish; intended and unintended changes that will occur by its use.
Course Objectives: The purpose of this course is to look at three aspects of the computer in education:

1. Machine learning/machine-intermediated learning--the computer as a device with which you communicate or where the machine is only an intermediary for human to human communications.
2. The computer as tutor/ tool/tutee – depending on your philosophy, the computer can take on different functions in education. Which fits your style and why?
3. Pedagogy - what is technology’s role in education; how can it help you be a better teacher? Starting at the beginning - what is pedagogy and what is a good teacher?

This class will integrate face-to-face meetings with significantly self-directed study and internet extensions. There will be three assignments and a term paper. Assignment 1 is on the aspect 1, assignment 2 on the aspect 2, and assignment 3 on the aspect 3. The first day of class will include discussion related to the course and term papers. The final class will include time for everyone to make presentations about their term papers. In addition to the above mentioned class meetings and assignments, a list of movies related to pedagogy and philosophy will be provided. Each student is to view 5 of those movies.

Meeting Dates

1. Monday, Aug. 27th, 5:30-8:20pm (Introduction)
2. Monday, Sept. 17th, 5:30-8:20pm (Assignment 1 Due 5:30pm Sunday, Sept. 16th)
3. Monday, Oct. 15th, 5:30-8:20pm (Assignment 2 Due 5:30pm Sunday, Oct. 14th)
4. Monday, Nov. 12th, 5:30-8:20pm (Assignment 3 Due 5:30pm Sunday Nov. 11th)
5. Monday, Dec. 10th, 5:30-8:20pm (Term Paper/Final Project Due 5:30pm Sunday Dec. 9th)

Note:
Assignments due 5:30pm the day before meeting dates
Presentation of Term Papers/Final Projects: Monday, Dec. 10th, 5:30pm – 8:20pm

Criteria for Assessment

Grading
1. Online participation and facilitation: 20 pts (weekly discussion participation + one time facilitation for a week/topic discussion)
2. In-class participation: 10 pts
3. Three Assignments: 30 pts
4. Final project: 30 pts
5. Peer Feedback on Term Paper: 5 pts
6. Course Feedback: 5 pts

Grade Points
A 95-100
A- 90-95
B+  85-89
B   80-84
B-  75-79
C   70-74
D   below 69

Grading Policies

All assignments are due on the date specified in the syllabus. Five points will be subtracted for each day the assignment is late. If an assignment is later than one week, and prior arrangements have not been made, the assignment will not be accepted. \textbf{NOTE:} If you are overwhelmed or feeling behind, please contact me before the assignment is due to discuss options.

All students are expected to meet graduate standards by obtaining a "B" average on all assignments. This graduate standard indicates that the work was well done, complete, met stated criteria, represents a strong professional effort, and was turned in on time. Students seeking an "A" will need to demonstrate \textit{superior} performance through critical thinking, exemplary products, positive and supportive interactions with colleagues, and sustained active participation across course activities.

Any assignment that receives less than an 80\% may be reworked and resubmitted. In order to gain additional points, participants must indicate what they would like to improve upon and how they plan to do so. Participants will then have one week following receipt of a grade to make revisions. Participants are encouraged to work with their peers and share their work in order to receive feedback prior to due dates.

Course Platform and Basic Technical Requirements

Although the course is philosophical and theoretical in nature, we will take advantage of various new media and technologies to facilitate our learning. The course is using WebCT Vista for some of our file sharing and communication needs including online class discussions, chats, email, reading, assignments, etc.

Readings and Resources

\textbf{Activities and goals}: reading, participating and facilitating the discussions, making connections between the reading and practice, contributing original ideas, incorporating and responding to the other colleagues' perspectives.

It is expected that all participants progress at a similar pace (i.e., following the weekly schedule and assignments). I think this way, you won’t feel lost due to too much work at once, and that the whole class will benefit from more focused and synergistic discussions around the weekly topics.
It is also expected that two to three substantive but succinct postings from every participant on the discussion forum every two weeks. You should feel free to post your original comments or respond to the other colleagues. By substantive postings, I mean that you will need to back up your posting with your research and reading, together with your creative and spontaneous thoughts, whether you respond to a colleague or post an independent thought around the discussed topic. I don’t encourage a simple phrase such as “I agree” or “That’s wonderful” although I recognize the value of such a response. It can be frustrating to read through a series of postings that offer little information. Instead, please try to build on the conversation and introduce new ideas: cite specific points or reasons for your opinion or ask questions to clarify your understanding of what was said or to get other’s ideas, for instance.

Meanwhile I recommend that you not post a long essay paper under the discussion threads, because few people will have time to read long essays in an online discussion format. For the post on the discussion forum, one to three paragraphs, or 100 to 250 words could be reasonable lengths.

Please do not underestimate your own ability to encourage and motivate others in this course to learn and discover, neither should you underestimate the valuable experience you may obtain from dialoguing with the colleagues in this course. One of the greatest advantages of the online learning is the greater and equal opportunity for all participants to learn from each other by respecting and challenging their comments and inquiries.

The following are some /moves (adapted from Stephen Brookfield's "Discussion as a way of teaching") which I expect us to try out while responding to each other's postings:

- Ask a question or make a comment that shows you are interested in what another person says
- Ask a question or make a comment that encourages another person to elaborate on something that they have already said
- Make a comment that underscores the link between two people’s contributions
- Make a specific comment indicating how you found another person’s ideas interesting/useful.
- Contribute something that builds on, or springs from, what someone else has said. Be explicit about the way you are building on the other person’s thoughts
- Make a comment that at least partly paraphrases a point that someone has already made
- Make a summary observation that takes into account several people’s contributions & that touches on a recurring theme in the discussion
- Ask a cause and effect question – for example, “can you explain why you think it’s true that if these things are in place such and such a thing will occur?”
- Find a way to express appreciation for the enlightenment you have gained from the discussion. Be specific about what it was that helped you understand something better
- Disagree with someone in a respectful and constructive way
I will participate in the discussions as a regular participant. As instructor of the course, I may not respond to matters of opinion or discussion until others have had a chance to voice their thoughts. I may also occasionally play devil’s advocate, to draw out other views that may not be expressed on the discussion board, or to ask you to defend one particular viewpoint. The idea is to have everyone think reflectively and critically about the issues at hand and be able to express the ideas rather than reach the “correct” answer for these discussions.

**Aspect 1:** Machine learning/machine-intermediated learning--the computer as a device with which you communicate or where the machine is only an intermediary for human to human communications.

Readings:

Movies:
Watch two movies from the following list or ones that you think are relevant to machine, machine mediated learning, or memory and learning as supplementary “readings” for discussions on aspect 1 and the other aspects of this course. We will talk about these movies in the course. Please also feel free to incorporate any in your essay papers.
- The Matrix Trilogy (The Matrix, Matrix Reloaded, The Matrix Revolutions) ®
- The Lawnmower Man
- I, Robot
- Memento
- Finding Memo (PG)
- The Man with the 7 Second Memory (2005)
- Eternal Sunshine of the Spotless Mind (R for language, some drug use, and sexual content)
- Paycheck
- The Final Cut
- 2001 A Space Odyssey
- The Forbin Project
- Fahrenheit 451 (2005)

I’ve also created a wikispace (https://cecs6000.wikispaces.com/) for everyone to contribute relevant movies to the lists. To contribute to this wikispace, please simply type
https://cecs6000.wikispaces.com/ in your browser window and click on “join this space.” If you don’t have an account with wikispaces yet, and if you’ve never used wikispaces, it’s likely that you don’t have an account, please simply create a free account and wikispace for yourself. After you’ve created the account, you can click on “join this space” and become a member of this space to contribute.

Here’s a tutorial on how to create an account and join a wikispace: http://courseweb.unt.edu/llin/cecs5200/movies/wikiSpaceNewAccountSignIn.swf. I created the tutorial for a different class, but the process is similar.

Aspect 2: The computer as tutor / tool / tutee / agent / inseparable part of a human body / other (?) – depending on your philosophy, the computer can take on different functions in education. Which fits your style and why?

Readings:

Aspect 3: Pedagogy - what is technology’s role in education; how can it help you be a better teacher? Starting at the beginning - what is pedagogy and what is a good teacher?

Readings:


Web resources:
http://tip.psychology.org/theories.html
http://www.scs.sk.ca/cyber/master/pedagogicaltheory.htm

Movies:
1. Watch movies on teachers (listed below or the relevant ones of your interest) and compare/contrast their intended audiences of learners as well as their teaching goals/pedagogical styles. Is any form of technology used in either? Are their underlying philosophies of education in either that you can identify?
   • Conrack/Voigt
   • Dead Poet's Society/Williams
   • Emperor's Club/Kline
   • Goodbye Mr. Chips
   • Mona Lisa Smile (2003)

2. Compare the movie series Matrix (or A Space Odyssey, The Forbin Project, or other relevant movies about memory and machine learning) to the previous 2 selections. Would you agree that the basic premise of Matrix and the kind present an extreme view of technology in education?

Assignments

*Assignment 1*: (Due 5:30pm Sunday, Sept. 16th)
Write a 300-500 word essay summarizing your views on machine learning or/and machine-intermediated learning, whether or not you believe computers will some day be intelligent. Please create a thread and upload your essay as an attachment. Please name your file in this fashion: LastnameFirstnameMachineLearning07.doc. For instance: LinLinMachineLearning07.doc

*Assignment 2*: (Due 5:30pm Sunday, Oct. 14th)
Write a 300-500 word reflection on your philosophy of computers in education. What role(s) do you think the computer plays in education, and why? Please create a thread and upload your essay as an attachment. Please name your file in this fashion: LastnameFirstnameCompEd07.doc. For instance: LinLinCompEd07.doc
Assignment 3: (Due 5:30pm Sunday Nov. 11th)
Write a 300-500 word essay discussing what you think may be the critical deciding factors for the development of educational technology in the next 25 years. Please create a thread and upload your essay as an attachment. Please name your file is this fashion: LastnameFirstnameCriticalTechDevEd07.doc. For instance: LinLinCriticalTechDevEd07.doc

Final Project (Assignment 4/Term Paper Due 5:30pm Sunday Dec. 9th)
The following is rough guideline for a paper. For interest in a project, please feel free to throw out your ideas in the class discussion forum. The class as a whole will help you decide if it's a worthy effort relevant to this course.

- Produce at 20-25 page (double-spaced, Times New Roman, font size 12) term paper with at least 10 references, APA style.
- The topic should be grounded in Philosophy of Computing in Education.
- Include components from at least one journal article, one book chapter, and one movie you have viewed for class (choose 3 new ones of your own).
- It is suggested that you build on one aspect of the assignments required for class. (Probably this means one of your essays will be expanded into 10 pages.)
- It is suggested that you chose one of the philosophies discussed in class as your underlying theme.
- It is suggested that you must address pedagogy in some form.
- It is suggested that you must focus on one or more technologies.
- Comparisons/contrasts of two or more philosophies, including discussion of where their conflicts lie, are acceptable.
- Comparisons/contrasts of two or more technologies, given an underlying philosophy, are acceptable.
- Intersections of technology and pedagogy (taxonomy of which teaching style fits which philosophy) are acceptable.
- Critical reviews including before vs. after reflections by authorities we have studied are acceptable.
- Critical essays for/against the Clark arguments are acceptable.
- Other topics that meet the approval of the class are welcome.

Please use the class discussion forum to brainstorm ideas for the final paper or project, and to provide feedback for each other's paper or project. Please create a thread and upload your essay as an attachment. Please name your file is this fashion: LastnameFirstnamePhiTechEd07.doc. For instance: LinLinPhiTechEd07.doc

Course Outline -- Weekly Schedule

[Note: Subject to change based on students’ feedback]
<table>
<thead>
<tr>
<th>Units / Aspects</th>
<th>Main Readings and Resources</th>
<th>Topics and Group Discussions (Facilitators)</th>
<th>Individual Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug. 27: Class Meet</td>
<td>Introduction and Course Overview (Lin Lin)</td>
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<tr>
<td>Aspect 1: Machine learning/machine-intermediated learning--the computer as a device with which you communicate or where the machine is only an intermediary for human to human communications</td>
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<tr>
<td>3 (Sept. 3 – Sept. 10)</td>
<td>Boole, G. (1854) [Chapter XXII]</td>
<td>Machine intermediated learning (Tip Robertson)</td>
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<tr>
<td>Sept. 17: Class Meet</td>
<td>Review, Overview, Questions and Discussions (Lin Lin)</td>
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<td>Aspect 2: The computer as tutor / tool / tutee / agent / inseparable part of a human body / other (?) – depending on your philosophy, the computer can take on different functions in education. Which fits your style and why?</td>
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<td>Oct. 15: Class Meet</td>
<td>Review, Overview, Questions and Discussions (Lin Lin)</td>
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<td>Aspect 3: Pedagogy - what is technology’s role in education; how can it help you be a better teacher? Starting at the beginning - what is pedagogy and what is a good teacher?</td>
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<td>8 (Oct. 15 – Oct. 29)</td>
<td>Movies on teacher, pedagogy, machine learning, memory, and learning</td>
<td>Movie comparison/contrast (Julie McLeod)</td>
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<td>9 (Oct. 29 – Nov. 5)</td>
<td>Ashby, W. (2001)</td>
<td>Systems thinking; use of an established framework and</td>
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<td>Date</td>
<td>Topic</td>
<td>Reading / Assignment</td>
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<td>10 (Nov. 5 – Nov. 12)</td>
<td>Lessig, L. (1999)</td>
<td>Code; Discuss the types of relative advantages and challenges you see in the future for computers in education (Michael Weaver, and Angchun Peemasak)</td>
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<tr>
<td>Nov. 12: Class Meet</td>
<td>Review, Overview, Questions and Discussions (Lin Lin)</td>
<td>Assignment 3 Due on Sunday, Nov. 11, 5:30pm</td>
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<td>Nov. 22 – Nov. 25</td>
<td>Thanksgiving Day – Happy Thanksgiving!</td>
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<tr>
<td>Dec. 10: Class Meet</td>
<td>Term Paper Presentation / Wrap Up (Lin Lin)</td>
<td>Term Paper Due on Sunday, Dec. 9, 5:30pm</td>
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**Special Notes and Policies**

**University use of electronic mail:** A University-assigned student email account shall be an official University means of communication with all students. Students are responsible for all information sent to them via their University assigned email account. If a student chooses to forward their University email account, he or she is responsible for all information, including attachments, sent to any other email account.

**Students with Disabilities:** University of North Texas recognizes its responsibility for creating an institutional climate in which students with disabilities can thrive. In accordance with university policy, if you have a documented disability and require accommodations to obtain equal access in this course, please contact the instructor at the beginning of the semester or when given an assignment for which an accommodation is necessary.
required. Students with disabilities must verify their eligibility through the Office of
Student Disability Services.

Plagiarism: Under all circumstances, you are bound by the UNT policies on academic
dishonesty and cheating. Any materials you have used or adapted must be fully credited
and the original author and location fully cited. Any verified act of plagiarism, no matter
how seemingly small or inconsequential, will result in an F in the course and sanctions by
the University.