ED601/SI549
Transformative Learning & Teaching with Technology

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Office Phone: 734-647-9572
Class Email: ed601@umich.edu
Twitter: @BarryFishman, Course Hashtag: #EDUC601
Class Meeting: Wednesdays, 9 am – 12 pm, SoE 4212
Office Hours: Tuesdays, 1:30 – 3:30 pm (reserve a slot at http://tinyurl.com/3ff8ocm)

Class blog: http://transformativetech.wordpress.com/
Google Docs shared notes: http://tinyurl.com/3evo9sm

Course Objectives:
• Students will develop knowledge of the way(s) technology can support learning and teaching.
• Students will develop an understanding of the breadth and depth of the learning tech field.
• Students will develop critical perspectives on classroom uses of learning technologies.
• Students will become conversant with key developments and people in learning technologies.
• Students will develop their skills as presenters, discussion leaders, and writers.

Course Requirements and Assessment:

<table>
<thead>
<tr>
<th>Task/Assignment</th>
<th>Due Date</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance and active participation</td>
<td>Ongoing</td>
<td>15%</td>
</tr>
<tr>
<td>Reading Reactions</td>
<td>Each Tues. @ 12 noon</td>
<td>15%</td>
</tr>
<tr>
<td>Show and Tell</td>
<td>Varies</td>
<td>10%</td>
</tr>
<tr>
<td>Conceptual Framework (First Draft)</td>
<td>09/21/11 @ 9 am</td>
<td>5%</td>
</tr>
<tr>
<td>“Deep Dive” Topic Statement</td>
<td>10/12/11 @ 5 pm</td>
<td>5%</td>
</tr>
<tr>
<td>“Deep Dive” Rough Draft</td>
<td>11/30/11 @ 9 am</td>
<td>n/a</td>
</tr>
<tr>
<td>“Deep Dive” Poster Presentation</td>
<td>12/7/11 in class</td>
<td>10%</td>
</tr>
<tr>
<td>“Deep Dive” Final Submission</td>
<td>12/9/11 @ 4 pm</td>
<td>25%</td>
</tr>
<tr>
<td>Conceptual Framework (Revised and Revisited)</td>
<td>12/12/11 @ 4 pm</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td></td>
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Texts
Required texts, available for purchase at Ulrich’s or Amazon, and also at Shapiro Reserves:


Other readings are distributed through CTools or available online. Be sure to check prior to completing each week’s reading reaction to make sure you’re reading the most recent assignments!
Information About Assignments

I. Class Participation

Attendance and Active Participation
We will work to build a learning community, to enhance the learning experience for all. To do this requires that you commit to the class and participate. I expect attendance at all class meetings. Please communicate with me if you must be absent for any reason. You are also encouraged to post your thoughts or discoveries to the class blog, at http://transformativetech.wordpress.com/ (you will be instructed in how to sign up for a WordPress account and be given access as a contributor to this blog).

Weekly Reading Reaction (on CTools)
Each week, you must write a summary or analysis of the reading for that week in the form of a blog post, to the discussion forum on our class CTools site. 15% of your grade is based on your submission of these reactions, so missing reactions or not taking them seriously will impact your bottom line.

Your reaction should summarize, analyze, or critique the week’s readings. There is no minimum length for these reactions, though there is a maximum length of 500 words! You are encouraged to be creative. (Did I say you had to use words?) However (you knew there would be a however), your reaction MUST do the following:

• Demonstrate your recognition of the main points of the reading.
  (It is OK if you didn’t fully understand the reading. Say so, and describe what you found confusing.)
• Tell us how the reading affects your thinking about learning and/or technology.
• Raise/identify at least one issue you’d like to see us explore further.

Each week, your reading reaction must be posted to the appropriate CTools Forum by Tuesday at 12:00 noon. Note that all reading reactions will be viewable by your classmates, and I encourage you to read and comment on each other’s reactions before coming to class.

Show and Tell
Throughout the term one or more of you will be assigned to bring in examples of educational software or learning technology (Notice the use of these two terms!) of your own choosing to share with the class. The object of your show and tell can be related to the topic of that week (e.g., math, science, history) or it can be something that you think is under-represented in the syllabus that you want us to talk about (e.g., special education, foreign language, etc.). You must present your selected software/technology to the class for discussion and critique.

There are two goals for this activity: to diversify the range of software tools we explore in class, and to develop your presentation and critiquing skills. Here is some guidance on this task:

• Identify the software or resources designated for your session (confirm your choice with the professor).
• Locate, install (if necessary), and learn to use the software for your session.
• Prepare and present an introduction to the software or technology to the class.
• Presentations are not necessarily arguments for or against a particular tool; instead, they should take the form of analyses, connecting theory to what you’re examining. Tell us what you notice, what you observe, what’s interesting to you and for what reasons.
• Presentations should have one or two main points. Structure is important! Tell us at the start what you will be discussing, and be sure to connect the examples you use in a way that helps us clearly see what you see.
• Presentations must be NO LONGER THAN 15 MINUTES.
• Discussion time may last for another 15 minutes, or beyond (at the professor’s discretion) if productively related to ongoing class themes.
II. Developing a Personal Conceptual Framework

This assignment is designed to help you clarify and articulate your own beliefs about technology for learning. Reflect on your experiences with technology and learning and think about what you see as the critical issues for consideration by designers, teachers, and researchers. What are your criteria for evaluating the quality of educational technology in any particular implementation?

In five pages or less (your final reflection will be longer), write a personal reflection that describes your conceptual framework for evaluating or critiquing the use(s) of technology for learning. Give examples from personal experiences to illustrate your points. Also, create a visual representation that summarizes your conceptual framework. This can be a diagram, table, drawing, or anything in any medium (use your imagination) that communicates your ideas. We will discuss the conceptual frameworks as a class so keep in mind that your visual representation needs to be meaningful not only to yourself, but to others.

In your first draft, your framework need not use any formal citations or references; it is meant to get you thinking about your assumptions, values, and beliefs related to the uses of learning technologies. In the final version, due at the end of the term, your framework should be expanded to reflect the readings you’ve been doing in this class, your other classes, and beyond. I expect that the readings on the syllabus will help to give “formal” names to some of your “informal” understandings. These understandings should now be buttressed with citations.

The development of your conceptual framework is a semester long project (at least). Submit your conceptual frameworks (preliminary and final) to CTools by the due dates. See CTools for rubrics.

III. Diving Deep on a Learning Tech Issue

During the semester, you will select an issue related to technology and learning that is important to you, and write a research and possibly an advocacy paper that does the following:

- Introduces and explains the issue or topic, including why it is important.
- Presents a detailed (and research-based, with citations) background for the issue, discussing:
  - What is currently known about the benefits or problems with this issue or topic;
  - What the major challenges are related to the issue or topic;
  - Some examples of this issue or topic in practice, either from education or from other domains (note that if you are being forward-looking or futuristic, these can be hypothetical).
- Takes a stance on what should be done next concerning the topic or issue, and argues for that stance.

This assignment will be completed in two phases. Phase 1 – a statement of intent where you briefly describe the issue and get approval from the professor to pursue it. Phase 2 – a final submission, turned in at the end of the semester. You will also make a poster presentation on the last day of class (let’s consider this Phase 1.5), in order to gather feedback from the class that you can incorporate into your final submission before turning it in.

Note that the focus of your deep five might be something you are strongly in favor of and want to see more of in education or something you are strongly against and think should stop or go away.
IV. A Word About Grading

I will grade all assignments using the following scale (please refer to individual assignment rubrics on CTools for details about the required elements of each assignment).

<table>
<thead>
<tr>
<th>Letter</th>
<th>Points</th>
<th>What it Means…</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>100</td>
<td>Exceeds all expectations as specified in the rubric across all elements.</td>
</tr>
<tr>
<td>A</td>
<td>96</td>
<td>Meets all of the expectations as specified in the rubric, with two elements exceeding expectations.</td>
</tr>
<tr>
<td>A-</td>
<td>92</td>
<td>Meets all of the expectations as specified in the rubric, with one element exceeding expectations.</td>
</tr>
<tr>
<td>B+</td>
<td>89</td>
<td>Meets all of the expectations as specified in the rubric. (This is the default grade.)</td>
</tr>
<tr>
<td>B</td>
<td>85</td>
<td>Assignment contains all the elements as specified in the rubric, but one aspect is poorly executed.</td>
</tr>
<tr>
<td>B-</td>
<td>82</td>
<td>One required element of the assignment is missing or so poorly executed that it might as well be missing, or multiple elements are poorly executed.</td>
</tr>
<tr>
<td>C+</td>
<td>79</td>
<td>The assignment has several missing required elements, and appears not to follow the rubric.</td>
</tr>
<tr>
<td>Doom</td>
<td>70</td>
<td>Why did you turn this in again?</td>
</tr>
</tbody>
</table>

NOTE that I will assign only a letter grade to your paper. On CTools that letter grade will be translated into the points indicated. There is no quibbling over points in this system: letter grade = points. Note also that the points are higher than the “cut points” for final course grades within the CTools grade book. This is purposeful, so that your final grade is not unduly weighed down by any individual grade. Note finally that all grades are weighted by a percentage, as indicated both in the CTools grade book and on the front page of this syllabus.

You may discuss grades on individual assignments with me, but you must wait at least 24 hours after I return the work to you, and you may revise and resubmit any assignment ONCE for re-evaluation. You have 1 week from the time I release/return the graded assignment to you to make any re-submission. Any resubmission MUST be accompanied by a cover note specifying the changes that were made in order to redress the problems noted in my evaluation. Assignments will not be re-graded after 1 week.

V. The Fine Print

General Comments on Assignments and Course Requirements

- Grading criteria will either be posted to CTools or explained in class.
- As the semester continues, the instructor may alter or add to the assignments. Pay attention!
- For all assignments, you are expected to draw heavily on readings from the entire course in justifying your design choices, research rationale, etc. If all you can offer is your own opinion, why bother taking the class?
- Professionalism is important. Grammar, style, organization, and clarity count.
- Writing style matters – if you need help with your writing, particularly if English is not your native language, I strongly encourage you to seek the support of the Sweetland Writing Center before turning in your papers.
- Cite all your sources in APA format—points will be deducted for failing to do this. If you don’t know APA format, check out one of the online guides to APA style (e.g., http://tinyurl.com/qy22v) and figure it out. Note that I do not care about the details with regard to paper formatting – just the citation and reference section styles. This isn’t narrow-mindedness; common formats help reduce uncertainty and facilitate the sharing of work and ideas, a critical component of a healthy intellectual
community. To make life easier, acquire some form of computer-based reference and citation manager and use it. If you start building a reference collection now, it will serve you for a long time.

- Late assignments will be marked down one-half letter grade for each day that they are late, effective immediately at the time established as the deadline. Students should contact the instructor immediately upon realizing that an assignment will be late.
- Incompletes are given only under unusual extenuating circumstances.

**Policy on Original Work**

Unless otherwise specified, all submitted work must be your own, original work. Any excerpts from the work of others must be clearly identified as a quotation, and a proper citation provided. You may obtain copy editing assistance, and you may discuss your ideas with others, but all substantive writing and ideas must be your own, or be explicitly attributed to another. An exception is group work, which is assumed to be a collaboration by all group members. See both the University policy on Academic Integrity (http://spg.umich.edu/pdf/303.03.pdf) and the LSA Office of the Assistant Dean for Academic Affairs (http://www.lsa.umich.edu/academicintegrity/examples.html) for definitions of plagiarism, and associated consequences. Any violation of standards for academic integrity will result in severe penalties, which might range from failing an assignment to failing the course.

**Accommodations for Students with Disabilities**

If you think you need an accommodation for a disability, please let me know at your earliest convenience. Some aspects of this course, the assignments, the in-class activities, and the way we teach may be modified to facilitate your participation and progress. As soon as you make me aware of your needs, we can work with the Office of Services for Students with Disabilities (SSD) to help determine appropriate accommodations. SSD (734-763-3000; http://ssd.umich.edu/) typically recommends accommodations through a Verified Individualized Services and Accommodations (VISA) form. I will treat any information you provide as private and confidential.

**Pay Attention!**

I reserve the right to change this syllabus at any time, and will notify the class of changes when they occur. These changes may include additions or changes to the readings or assignments. Please pay attention to class announcements, both in class and on-line, to learn about changes!

**Rules of the Class**

- You get out of class what you put in to class.
- All ideas are worth consideration.
- Everyone is responsible for their own learning.
- Everyone is responsible for everyone else’s learning.
- Only YOU are responsible for the quality of your work.
- There is no such thing as “Fight Club.”
Course Schedule

Week 1 — September 7 — NO CLASS MEETING – We start next week
We will hold our first class session next week, on Wednesday September 14th.

Week 2 — September 14 — What is Transformational Technology for Learning?
Introduction to course topics and assignments. No readings for this week.
(Savvy students may get a head start on reading the Cuban book and other readings.)

Sign up for Show & Tell: http://tinyurl.com/3ogaas8

Please write your personal Conceptual Framework paper before you start the reading for next week! It is due before class next Wednesday, on September 21st.

Week 3 — September 21 — What’s the Big Deal About Learning Technologies?

Hands-On: Geography and GIS: MyWorld and School 2.0

DUE: Submit the first draft of your personal Conceptual Framework is due TODAY before class begins. Please submit your conceptual frameworks to the assignment area on CTools by 9 am on 9/21.

NOTE: please upload either a Word or a PDF file to CTools. Do NOT paste your paper into the assignment section (this option should be disabled in any event). No Google Docs or Pages files, please. Do you still use LaTeX, WordPerfect or AppleWorks? Say “hi” to the 90s for me, please.

Week 4 — September 28 — The National Educational Technology Plan
(For the curious, older NETP documents are also available on the CTools site.)

Hands On: PhET Interactive Physics Simulations: http://phet.colorado.edu/

Show and Tell: Begins this week and continues for the rest of the term.
### Week 5 — October 5 — “Everyday” Technologies
Watch this: Chris Dede Tech Summit Keynote: http://tinyurl.com/45394b9
(Give yourself a head start reading the Collins and Halverson book for next week)

**Hands On:** Bring your cell phones (as if you’re ever without them).

**Guest Speaker:** Liz Kolb, University of Michigan

### Week 6 — October 12 — Are We Reformed Yet?
Collins and Halverson book: *Rethinking education in the age of technology: The digital revolution and schooling in America.*

**Hands On:** WebQuests http://webquest.org/

**DUE:** “Deep Dive” Topic Statement. Please upload to CTools by 5 pm on 10/12.

### Week 7 — October 19 — It’s Not All Fun & Games

**Hands On:** *The Lure of the Labyrinth* http://labyrinth.thinkport.org/www/

### Week 8 — October 26 — Focus on History

Watch David Christian’s TED Talk: http://tinyurl.com/442h549
Watch Bob Bain on “The Big History of Coffee:” http://tinyurl.com/3ffpbpf
Watch 2 additional videos on teaching Big History: http://tinyurl.com/3j5tjhh and http://tinyurl.com/43h65dt

**Guest Speaker:** Bob Bain, The University of Michigan

**Hands On:** *Big History*
**Week 9 — November 2 — Focus on Mathematics**


**Guest Speaker:** Vincent Aleven, Human-Computer Interaction Institute, Carnegie Mellon University  
**Hands On:** Cognitive Tutors

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**Week 10 — November 9 — Online and Individualized Learning**


Watch Salman Khan’s TED Talk: [http://tinyurl.com/5ur4v3q](http://tinyurl.com/5ur4v3q)  
Watch other videos from Los Altos School District at the Gates Notes: [http://tinyurl.com/44kks3u](http://tinyurl.com/44kks3u)

**Hands On:** Khan Academy and edNovo Gooru  
**Guest Speaker:** Prasad Ram, edNovo

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**Week 11 — November 16 — Universal Design and Equal Access**


**Hands On:** Thinking Reader  
**Guest Speaker:** David Rose, Center for Applied Special Technologies
Week 12 — November 23 — Focus on Science


**Guest Speaker:** Jim Slotta, Ontario Institute for Studies in Education/U. Toronto

**Hands On:** WISE [http://wise4.berkeley.edu/](http://wise4.berkeley.edu/)

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Week 13 — November 30 — A New Culture of Learning


**Hands On:** *StarLogo TNG* and *Scratch*

**DUE (optional):** “Deep Dive” Rough Draft. Please upload to CTools by 9 am on 11/30, BEFORE coming to class.

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Week 14 — December 7 — Last Class Meeting

Debriefing on semester.

**DUE in class:** Posters about your “Deep Dive” project, for in-class presentation.

**DUE on Friday, December 9th:**

Your final “Deep Dive” document must be submitted to the assignment area of CTools by 4 pm on Friday, December 9th.

**DUE on Monday, December 12th:** Your final conceptual framework paper/representation must be submitted to the assignment area of CTools by 4pm on Monday, December 12th. If you employ a medium not conducive to uploading, please deliver your final conceptual framework to Professor Fishman’s office.

*Don’t forget to provide course feedback on CTools!*

*Your feedback is crucial to improve this class for future students.*