

# Knowledge Media and Learning

## CTL 1926

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### Instructor Information: Professor James D. Slotta

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Office Hours: By Appointment (*e-mail is always best*)

### Class Schedule

- Thurs 1-4 PM, room 4-422
- Weekly activities in class: discussions, Student-led presentations, Computer-based activities, Design teams
- Weekly activities online: Readings, Online Discussions, Wiki contributions, Lesson design activities

### Class Overview

This class works as a knowledge community to investigate various themes relating to knowledge media and their role in support of learning and instruction in the classroom, on the playground, in the museum, online, or anywhere else that learning may happen. We make connections to research from the learning sciences and other disciplines: How do people learn? How can technology expedite learning or knowledge construction?

Working collectively, we explore a series of themes, building on materials left by students from previous years. Where possible, we try to use the various media as a means of exploring these themes, in order to get the feel of wikis, social tagging, immersive environments, or tangible and embodied forms of learning. By engaging in the relevant forms of media practice, we gain insight into the kinds of interactions they may support for learning. For each theme, a small group of students designs and leads all course activities, advancing a media-enhanced pedagogical design. All the activity designs from previous course enactments, recorded by the students who designed them, serve as a “knowledge base” to inspire your own designs.

- What should be happening in the culture of today's classrooms, and how can technology make an impact? What should the role of the teacher be in such classrooms? How can we develop "smart" educational content that helps teachers with assessment and helps scaffold students in otherwise challenging pedagogical scripts?
- How much information about my health care practices should be available to my smart home?
- Can I interact deeply with others in multi-user virtual environments? What kinds of interactions are best suited for such spaces?
- How can podcasts and streaming video add to my experience in the grocery store, cafe, city streets or classrooms?
- What new learning opportunities derive from layered information systems like Google Earth, or other mash-ups, like Four-Square?

In a culminating project, small groups of students develop a "Design idea" that applies one or more forms of knowledge media that we have investigated in a potential application that would serve a particular knowledge community.

**Course Portal:** All the materials and online activities of this class will be coordinated through a wiki space located at <http://www.encorewiki.org/display/KMDI2003/Introduction>. **Please go to that wiki page, responding to the email invitation you will receive, and then email the instructor who will add you to a mailing list and create editing permissions for your account.** You will add all new content to this “course portal,” and maintain the resources there for use by future generations of this course. Within the portal are pages for each of the course themes, which include links to previous designs and many resources left there by your peers from prior offerings of this course.

## Class Activities/Grading

The course will progress through a sequence of themes, led by teams of students. This term, we will explore FOUR themes, proposed below, which are **open to discussion and revision** (i.e., if there is sufficient interest in alternatives). Students will be graded as a group in their design, delivery and documentation of these themes. They will also work in small teams of 2 or 3 (not necessarily the same teams as their theme teams) to create a new “Design Concept” that applies the ideas from our course to create a new tool or environment that will serve the learning goals of a specified knowledge community. Themes will be evaluated as they are completed, but grades will not be determined until after all themes are completed, in order to ensure fairness.

- Theme preparation (25% of course grade) – This applies to the process of designing a pedagogical experience for your peers in the class, including readings, homeworks and activities in class. Ideally, the design of the theme activities will embrace the specific characteristics or affordances of the knowledge media that comprise that theme (e.g., in the immersive environments theme, we will actually use immersive environments like Second Life to explore the concepts and opportunities).
- Theme leadership (10% of course grade) – This applies to your enactment of the design, including your preparation for class, your presence and leadership of the class during homework activities and in-class activities, your communication with the instructor, and your follow up on any issues that emerge during your theme.
- Wiki write-up of Theme (10% of course grade) – This applies to your documentation of all resources, homeworks and in-class activities, in order to ensure that they are connected clearly within the existing theme pages in the wiki and are accessible to future cohorts of students.
- Homework activities (10% of course grade) – This applies to your participation in the homework activities designed by your peers for their respective themes.
- In-class Participation (20% of course grade) – This applies to your participation in online and in-class discussions, which comprise a major portion of the in-class activities.
- Design Ideas: media, community, completeness (15% of course grade) – Your preliminary design idea for a knowledge media tool or environment. The specific elements of this assignment will be discussed in class, and many examples are available on the wiki.
- Design presentation and Write-up (10% of course grade) – This is the final form of your design concept assignment. It will include a wiki page that you will add to our collection, that will have an overview of the purpose, the knowledge community, and the specific knowledge media involved in your design. It will also include a 10-15 minute presentation of your design to the class.

## Weekly Format

- For two week periods, a team of students will lead our exploration of one theme related to knowledge media and learning. This year, the themes are (tentatively): (1) Smart Education (2) Smart Cities (3) Smart Health (4) Smart Lifestyles.

- Teams of 2, 3, or 4 students will collaborate to design the activities and resources for two class meetings, working closely with the instructor who will help plan, but will not be involved in the leadership of those class days (he will participate as a class member!)

Typically, there will be one long or two short papers, and or one or more Web sites to be reviewed by the class as homework, as well as online activities or field trips, designed to orient the class community to this theme. The class will engage in discussions and in-class activities, with many small group discussions. The goal of classroom activities will be to explore issues such as: (1) What theoretical commitments or basis are connected with this theme? What assumptions? (2) What are the methodological affordances/constraint? What kind of research could be supported? (3) Implications for learning in classrooms or other knowledge communities

Finally, every other week, we will progress in our collaborative design project, where students work in groups of 2 or 3 (not necessarily the same as their theme team!) to create a media-enhanced learning design that applies one or more of the themes in creating a learning innovation. The instructor will lead this process, which will take one hour of class time and some homework time.

## Syllabus will be sign-up, starting next week (Jan 15...)

### January 8, 2015

- **Theme:** Welcome, introductions, course overview
- **Presenter:** Slotta
- **Discussions:**
  - Changing nature of knowledge and learning
  - Our class as a knowledge community; Knowledge media for knowledge communities
- **Collaborative work (table groups):** Explore themes pedagogical perspectives
- **Discuss**
- **Homework:**
  - **Reading:** Scardamalia, 2002 (p 1- 12, 20-24); Slotta & Najafi, 2012
  - **Online activity:** Create Wiki account, Add to Theme pages

### Jan. 15, 2015

- **Theme:** Knowledge Media and Design
- **Presenter:** Slotta
- **Discussions:**
  - Learning as Knowledge Community: Collective epistemology
  - 4 Course themes – sign up and organize.
  - Designing for knowledge media
- **Collaborative work:** Explore designs.
  - Break into table groups to discuss our themes
  - examine some design ideas
- **Discuss**
- **Homework:**
  - *Tentative:* Read Byelaczyc et al paper, Roschelle et al, 2006
  - Complete “pedagogical perspectives” homework

<b>Jan. 22, 2015</b>	Theme 1, Day 1	<i>Team 1</i>
	○ <b>Review design ideas, Design brainstorm</b>	
<b>Jan 29, 2015</b>	Theme 1, Day 2	<i>Team 1</i>
<b>Feb 5, 2015</b>	Theme 2, Day 1	<i>Team 2</i>
<b>Feb 12, 2015</b>	Theme 2, Day 2	<i>Team 2 – FI Reading Week...</i>
<b>Feb 19, 2015</b>	Theme 3, Day 1	<i>Team 3</i>
<b>Feb 26, 2015</b>	Theme 3, Day 2	<i>Team 3</i>
<b>Mar 5, 2015</b>	Design Day	<i>Slotta, Birch – work in design teams, peer review.</i>
-- no class, March 12 - - OISE March break		
<b>Mar 19, 2015</b>	Theme 4, Day 1	<i>Team 4</i>
<b>Mar 26, 2015</b>	Theme 4, Day 1	<i>Team 4</i>
<b>April 2, 2015</b>	Presentation Fair	<i>Slotta, Birch – present out final designs</i>