

## Syllabus and Schedule for D/L/C Course

\*\*\* Subject to Change \*\*\*

<http://l3dswiki.cs.colorado.edu:3232/dlc-2007>

### Color coding:

- Sessions (including Demos) in the L3D Lab
- Guest Lectures
- Course Participants Presentations and Homework

## January — Introduction and Overview Lectures

17 (W) Introduction and Overview, Discussion of Class (Participation Requirements, Grading)

22 (M) Overview of **Design**

Questionnaire: due 1/22, 10:00am

24 (W) Overview of **Learning**

Assignment 1 – due: Jan 25, 10:00am

29 (M) Overview of **Collaboration** — read: "In Defense of Cheating" by Don Norman;  
accessible via: <http://www.jnd.org/dn.mss/InDefenseOfCheating.html>

Assignment 2 – due: Jan 29, 10:00am

## February

31 (W) — Simon's "Architecture of Complexity" and The Importance of Representations in Design – Chapter 8 "The Architecture of Complexity: Hierarchic Systems" in Simon, H. A. (1996) The Sciences of the Artificial, third ed., The MIT Press, Cambridge, MA  
([article distributed on paper](#))

Assignment 3 – due: Jan31 10:00am

5 (M): **Domain-Oriented Design Environments and Critiquing** → Fischer, G., Nakakoji, K., Ostwald, J., Stahl, G., & Sumner, T. (1998) "Embedding Critics in Design Environments." In M. T. Maybury & W. Wahlster (Eds.), Readings in Intelligent User Interfaces, Morgan Kaufmann, San Francisco, pp. 537-561. + **Video Tape "Janus"**  
<http://l3d.cs.colorado.edu/~gerhard/papers/embedded-critics-98.pdf>

7 (W): Discussion of **Independent Research and Projects for the Class**

- 12 (M) **From HCI to Human Problem Domain Interaction** → Buxton, W. (2001) "Less is More (More or Less)." In P. J. Denning (Ed.), *The Invisible Future — the seamless integration of technology in everyday life*, McGraw-Hill, New York, pp. 145-179. available at: <http://billbuxton.com/LessIsMore.html>
- 14 (W) **Meta-Design** → Fischer, G., Giaccardi, E., Ye, Y., Sutcliffe, A. G., & Mehandjiev, N. (2004) "Meta-Design: A Manifesto for End-User Development," *Communications of the ACM*, 47(9), pp. 33-37. <http://13d.cs.colorado.edu/~gerhard/papers/CACM-meta-design.pdf>
- 19 (M) **Demo of Envisionment and Discovery Collaboratory (location: L3D Lab)** — please read: Arias, E. G., Eden, H., Fischer, G., Gorman, A., & Scharff, E. (2000) "Transcending the Individual Human Mind—Creating Shared Understanding through Collaborative Design," *ACM Transactions on Computer Human-Interaction*, 7(1), pp. 84-113. <http://13d.cs.colorado.edu/~gerhard/papers/tochi2000.pdf>
- 21 (W) **Role Play Session 1 with the Envisionment and Discovery Collaboratory — meet in the L3D Lab**
- 26 (M) **Design Methodologies** – paper: Fischer, G., Ye, Y., Giaccardi, E., DiGiano, C, Nakakoji, K A.: "Converging on a Science of Design through the Synthesis of Design Methodologies"; <http://13dswiki.cs.colorado.edu:3232/dlc-2007/31>
- 28 (W) **Guest Lecture (Jim Sullivan and Andy Gorman and Demonstration): "Universal Design and Design-for-All"** and **Demo of Clever Project — location: L3D Lab — please watch the multi-media representation at:** <http://13d.cs.colorado.edu/clever/index.html> — activate link "Load Flash Movie"

## March

- 5 (M) **Learning: From Speculation to Science** → Introduction to Bransford, J. D., Brown, A. L., & Cocking, R. R. (Eds.) (2001) *How People Learn — Brain, Mind, Experience, and School*, National Academy Press, Washington, D.C. ([article distributed on paper](#))
- 7(W) **Lifelong Learning and Self-Directed Learning** → Fischer, G. (2002) *Beyond 'Couch Potatoes': From Consumers to Designers and Active Contributors*, in *FirstMonday* (Peer-Reviewed Journal on the Internet), at [http://firstmonday.org/issues/issue7\\_12/fischer/](http://firstmonday.org/issues/issue7_12/fischer/)
- 12 (M) **Guest Lecture (Elisa Giaccardi): "IT and the Creative Practices"**
- 14 (W) **Beyond One-Sided Approaches of Learning** → Rogoff, B., Matsuov, E., & White, C. (1998) "Models of Teaching and Learning: Participation in a Community of Learners." In D. R. Olsen & N. Torrance (Eds.), *The Handbook of Education and Human Development — New Models of Learning, Teaching and Schooling*, Blackwell, Oxford, pp. 388-414. ([article distributed on paper](#))
- 19 (M): Pea, R. D. (2004) "The Social and Technological Dimensions of Scaffolding and Related Theoretical Concepts for Learning, Education, and Human Activity," *The Journal of the*

Learning Sciences, 13(3), pp. 423-451.

<http://13d.cs.colorado.edu/~gerhard/courses/dlc06/Pea-Roy-2004-JLS.pdf>

and / or:

Carmien, S., & Fischer, G. (2005) "Tools for Living and Tools for Learning" In, Proceedings of the HCI International Conference (HCII), Las Vegas, July 2005, (published on CD). <http://13d.cs.colorado.edu/~gerhard/papers/tools-hcii-2005.pdf>

**21 (W) Guest Lecture (Chris DiGiano, SRI International and CU Boulder): "Designing for distributed control in collaborative tools"**

**26 (M): Spring Break**

**28 (W): Spring Break**

## April

**2 (M) : Progress Reports on Independent Research (presentations by student teams)**

**4 (W) Learning on Demand and High-Functionality Applications** → Fischer, G. (2001) "User Modeling in Human-Computer Interaction," User Modeling and User-Adapted Interaction (UMUAI), Dordrecht, The Netherlands: Kluwer Academic Publishers, 11(2), pp. 65-86. <http://13d.cs.colorado.edu/~gerhard/papers/umuai2000.pdf>

**9 (M) Progress Reports on Projects (presentations by student teams)**

**11 (W): Guest Lecture (Yunwen Ye): Collaboration in Software Engineering**

**16 (M) Creativity** — Fischer, G., Giaccardi, E., Eden, H., Sugimoto, M., & Ye, Y. (2005) "Beyond Binary Choices: Integrating Individual and Social Creativity," International Journal of Human-Computer Studies (IJHCS) Special Issue on Computer Support for Creativity (E.A. Edmonds & L. Candy, Eds.), 63(4-5), pp. 482-512. <http://13d.cs.colorado.edu/~gerhard/papers/ind-social-creativity-05.pdf>

**18 (W) Ivan Illich: Chapter 6: "Learning Webs" in "Deschooling Society" (1971):**

<http://reactor-core.org/deschooling.html> →

<http://reactor-core.org/deschooling.html#chapter6>

and / or:

**Tim O'Reilly: "What Is Web 2.0: Design Patterns and Business Models for the Next Generation of Software"**

<http://www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html>

**23 (M) Presentation of Independent Research (presentations by student teams)**

**25 (W) Presentation of Independent Research (presentations by student teams)**

**30(M): Role Play Session 2 with the Envisionment and Discovery Collaboratory — meet in the L3D Lab**

**2 (W) Working Meeting of the Groups for Projects**

## May

\*\*\*\* May 4: Last Day of Classes \*\*\*\*

Exam date/time: Wed., May 9, 7:30 a.m. - 10:00 a.m.  
Presentation of Projects by student teams