

Syllabus and Schedule

*** Subject to Change ***

<http://l3dswiki.cs.colorado.edu:3232/dlc-2006>

January — Introduction and Overview Lectures

18 (W) Introduction, Discussion of Class

Questionnaire: due 1/23, 10:00am

23 (M) Overview of **Design** → please read "Some Notes about Design"

Assignment 1 – due: Jan 25, 10:00am

25 (W) Overview of **Learning** → Fischer, G. (1998) "Making Learning a Part of Life-Beyond the 'Gift-Wrapping' Approach of Technology." Notes from 6/96 NSF Symposium on Learning and Intelligent Systems

<http://l3d.cs.colorado.edu/~l3d/presentations/gf-wlf/>

30 (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 30, 10:00am

February — Series of Lectures about Design

1 (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: Feb1, 10:00am

6 (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://l3d.cs.colorado.edu/~gerhard/papers/tochi2000.pdf>

Assignment 4 – due: Feb6, 10:00am

8 (W): **Demo of Clever Project — location: L3D Lab — please watch the multi-media representation at: <http://l3d.cs.colorado.edu/clever/index.html>** — activate link "Load Flash Movie"

Assignment 5 – due: Feb 8, 10:00am

- 13 (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>

Assignment 6 – due: Feb 13, 10:00am

- 15 (W): **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>

IR: INTEREST

- 20 (M): **Role Play Session 1 with the Envisionment and Discovery Collaboratory** — meet in the L3D Lab

- 22(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://l3d.cs.colorado.edu/~gerhard/papers/CACM-meta-design.pdf>

IR: INITIAL IDEA

- 27 (M) **Guest Lecture — Elisa Giaccardi: "Design and Collaboration in the New Media Arts: A Metadesign Perspective"**. Papers: (1) Elisa Giaccardi, "Metadesign as an Emergent Design Culture", in *Leonardo*, 38:4 (August 2005), pp. 342-349, <http://muse.jhu.edu/journals/leonardo/v038/38.4giaccardi.pdf>; (2) Christopher Allen, "Tracing the Evolution of Social Software", in *Life with Alacrity*, October 2004, <http://www.lifewithalacrity.com/2004/10/>

PROJECT: INTEREST

March — Series of Lectures about Learning

- 1 (W) **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](#))

- 6(M) **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/

PROJECT: INITIAL DESCRIPTION

- 8 (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](#))

IR: FIRST PROGRESS REPORT

- 13 (M) **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>
PROJECT: PROPOSAL
- 15 (W) **Role Play Session 2 with the Envisionment and Discovery Collaboratory — meet in the L3D Lab**
- 20 (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>
- 22 (W) 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>
IR: SECOND PROGRESS REPORT
- 27 (M) **Spring Break – no lecture**
- 29 (W) **Spring Break – no lecture**

April — Series of Lectures about Collaboration

- 3 (M) Discussion of Independent Research (IR) and Projects
- 5 (W) **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>
PROJECT: FIRST PROGRESS REPORT
- 10 (M) **Guest Lecture** — Hal Eden: "Squeak: An Innovative Programming Environment supporting Design, Learning, and Collaboration"
- 12 (W) Themes for Collaboration: Reflective Communities, Communities of Practice and Communities of Interest, Distances in Collaboration, Interdisciplinary and Transdisciplinary Collaboration
- 17 (M) **Presentation of Independent Research**
IR: FINAL REPORT
- 19 (W) **Presentation of Independent Research**
- 24 (M) **Guest Lecture** — Yunwen Ye "CodeBroker" → paper: Ye, Y., & Fischer, G. (2005) "Reuse-Conducive Development Environments," International Journal Automated Software Engineering, Kluwer Academic Publishers, Dordrecht, Netherlands, 12(2), pp. 199-235.
<http://13d.cs.colorado.edu/~gerhard/papers/I-ASE-final.pdf>

- 26 (W) **Guest Lecture** — Shinichi Konomi: "Context Awareness and Privacy in Collaborative Environments" — paper: Mark Weiser, "The Computer for the Twenty-First Century," Scientific American, pp. 94-10, September 1991
<http://www.ubiq.com/hypertext/weiser/UbiHome.html>

PROJECT: SECOND PROGRESS REPORT

May — Presentation about Projects

- 1: **Presentation of Projects**

PROJECT: FINAL REPORT

- 3: **Presentation of Projects**

***** May 5: last day of classes ****