

Syllabus / Schedule of Sessions

<http://webguide.cs.colorado.edu:3232/dlc-2004/>

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

Remark: Please note that this timetable may be modified and updated at later points of time to account for emerging topics, student interests, student presentations, guest lectures, etc.

Introduction and Overview Lectures

January

- 12 Introduction, Discussion of Class
- 14 Demos of Envisionment and Discovery Collaboratory/PitaBoard and Clever; —
location: L3D Lab
- 19 **no lecture** — Martin King Holiday (university closed)
- 21 Overview of Design
- Assignment 1: due 1/21**
- 26 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://www.cs.colorado.edu/~l3d/presentations/gf-wlf/>]
- Assignment 2: due 1/26**
- 28 Overview of Collaboration
- Assignment 3: due 1/28**

Series of Lectures about Design

February

- 2 Design = The Science of the Artificial → 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. + **Videotape "Starfire"**
- Assignment 4: due 2/2**
- 4 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"**
- Assignment 5: due 2/4**

- 9 **Guest Lecture** — Hal Eden: Squeak — An Innovative Programming Environment
Initial Idea about Independent Research Projects Due
- 11 **Guest Lecture** — Elisa Giaccardi: Meta-Design - Interactive Art (**bring your laptop**)
Initial Team and Refined Ideas about Independent Research Projects Due
- 16 Role Playing with the EDC/PitaBoard — Session 1 — **location: L3D Lab**
Assignment 6: due 2/16
- 18 New Foundation for Human-Computer Interaction Research → Hollan, J., Hutchins, E., & Kirsch, D. (2001) "Distributed Cognition: Toward a New Foundation for Human-Computer Interaction Research." In J. M. Carroll (Ed.) Human-Computer Interaction in the New Millennium, ACM Press, New York, pp. 75-94.
Assignment 7: due 2/18
- 23 **Discussion of (a) Themes for Independent Research ("Book Project") and
(b) Ideas for Projects ("Hands-On")**
Assignment 8: due 2/23
- 25 Design to Learn and Design to Collaborate → explore two website:
(1) Computer Clubhouse: at:
<http://web.media.mit.edu/~mres/papers/Clubhouse/Clubhouse.htm>
<http://www.computerclubhouse.org/index.htm>
(2) MamaMedia at: <http://stage.mamamedia.com/>

Series of Lectures about Learning

March

- 1 **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.
Assignment 9: due 3/1
- 3 **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/
Assignment 10: due 3/3
- 8 **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://www.cs.colorado.edu/~gerhard/papers/umuai2000.pdf>
due: Project Proposal "Hands-On" (teams); Brief Discussion in Class
Assignment 11: due 3/8
- 10 **Role Playing** with EDC / PitaBoard — Session 2 — **location: L3D Lab**
- 15 **Guest Lecture** by Yunwen Ye: CodeBroker → Ye, Y., & Fischer, G. (2002) "Supporting Reuse by Delivering Task-Relevant and Personalized Information." In Proceedings of 2002 International Conference on Software Engineering (ICSE'02), Orlando, FL, pp. 513-523. Available at: <http://www.cs.colorado.edu/~gerhard/papers/icse2002.pdf>.

- 17 **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.
- 22 **Spring Break – no lecture**
24 **Spring Break – no lecture**
- 29: **Discussion of (a) Independent Research (“Book Project”) and (b) Projects (“Hands-On”) due: Progress Reports for both “Book Project” and “Hands-On”**
- 31: **From “Home Alone” to Collaborative and Organizational Learning** → Chapter 3 “Home Alone” in Brown, J. S. & Duguid, P. (2000) *The Social Life of Information*, Harvard Business School Press, Boston, MA.

Series of Lectures about Collaboration

April

- 5 Knowledge Management → Smith, R. G. & Farquhar, A. (2000) *The Road Ahead for Knowledge Management — An AI Perspective*, AI Magazine, 21(4), pp. 17-40
- 7 **Guest Lecture** about “Context Awareness in Collaborative Environments” — Shinichi Konomi
- 12 Independent Research Presentation: **Collaborative Learning in Undergraduate Classrooms** (Bill Beachley, Jun Chen, Huda Khan, Sarah Kim-Warren Scott Zweig)
- 14 Independent Research Presentation: **Learning: Theory and Practice** (Robert Surles, Jennifer Tamez)
- 19 Independent Research Presentation: **Design of User-Friendly Systems** (Joel Clawson, Genevieve Hudak, Brock LaMeres, Kitty Turner)
- 21 Independent Research Presentation: **Collaboration in Software Development Process** (Randell Rivadeneira, Rizwan Ansary, Andrew Skalet, Nilo Tsung)
- 26 Reviewing and Discussing the Projects (“Hands-On”)
- 28 **Guest Lecture** about Living Organizational Memories — Jonathan Ostwald

*** April 30: last day of classes ***

May

- 3 7:30pm – 10:00pm (during scheduled exam period) **Final Project Presentations due at 10:00am: Final Report for Projects**