

Gerhard Fischer (and Hal Eden, Hiroaki Ogata and Eric Scharff): "Design, Learning, and Collaboration" — Spring Semester 2002

Syllabus / Schedule of Sessions

<http://swiki.cs.colorado.edu:3232/dlc>

***** 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.

January — Overview

- 14 Introduction, Discussion of Class
- 16 Overview of Design + Eric Scharff: Demo of Using the Web in Class (including Swiki) + Videotape "The Knowledge Navigator" **Assignment 1: due 1/23**
- 21 **no lecture** — Martin King Holiday (university closed)
- 23 Presentation of the Envisionment and Discovery Collaboratory → "Transcending the Individual Human Mind — Creating Shared Understanding through Collaborative Design" (with Ernesto Arias, Hal Eden, Andrew Gorman, and Eric Scharff) ACM Transaction on Computer-Human Interaction (TOCHI) Vol. 7, No. 1, March 2000, pp. 84 - 113. [<http://www.cs.colorado.edu/~gerhard/papers/tochi2000.pdf>] — **location: L3D Lab**
- 28 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 1/28**
- 30 Overview of Collaboration **Assignment 3: due 1/30**

Series of Lectures about Design

February

- 4 **Discussion of Problem Ideas** and Guest Lecture by Eric Scharff: "Squeak" → **Assignment 4: due 2/4**
- 6 Design = The Science of the Artificial + Videotape "Starfire" — **Assignment 5: due 2/6**
- 11 Role Playing with the EDC/PitaBoard — Session 1 — **location: L3D Lab**
- 13 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. + plus: Janus Video Tape
- 18 Guest Lecture by Jonathan Ostwald: Design of Collaborative Environments: "DynaSites, Living Book, and livingOM"
- 20 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. + **discussion of Themes for Independent Research**

Series of Lectures about Learning

- 25 **Lifelong Learning and Self-Directed Learning** → Fischer, G: "Lifelong Learning: Changing Mindsets", Proceedings of ICCE 99, 7th International Conference on Computers in Education on "New Human Abilities for the Networked Society", November 4-7, 1999, Chiba, Japan. pp. 21 - 30.
[<http://www.cs.colorado.edu/~gerhard/papers/icce99.pdf>]
- 27 **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>

March

- 4 **Guest Lecture** by Yunwen Ye: CodeBroker → Yunwen Ye and G. Fischer: "Supporting Reuse by Delivering Task-Relevant and Personalized Information", in Proceedings of ICSE'2002: International Conference on Software Engineering, Orlando, May, 2002, (in press) [<http://www.cs.colorado.edu/~gerhard/papers/1cse2002.pdf>]
- 6 **Role Playing** with EDC / PitaBoard — Session 2 — **location: L3D Lab**
- 11 **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>
- 13 **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.
Assignment 13 due at 10:00am
one page progress report due for Independent Research
- 18 **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.
Assignment 14 due at 10:00am
Mid-Term Questionnaire due at 10:00am
- 20 **Projects — Progress Reports**
Progress Report for Projects due at 10:00am
- 25 **Spring Break – no lecture**
- 27 **Spring Break – no lecture**

Series of Lectures about Collaboration

April

- 1 **Knowledge Management** → Smith, R. G. & Farquhar, A. (2000) "The Road Ahead for Knowledge Management — An AI Perspective," AI Magazine, 21(4), pp. 17-40
Assignment 15 due at 10:00am
- 2 **New Forms of Collaborations: learning webs, online communities, social filtering, recommender systems** → Terveen, L. & Hill, W. (2001) "Beyond Recommender Systems: Helping People Help Each Other." In J. M. Carroll (Ed.) Human-Computer Interaction in the New Millennium, ACM Press, New York, pp. 487-509.
Assignment 16 due at 10:00am
- 8 **Independent Research Presentations** **3-5 page final report due for Independent Research**
- 10 **Independent Research Presentations**
- 15 **Independent Research Presentations**
- 17 **Guest Lecture: Hiroaki Ogata** — Collaborative Learning: Theory and Systems
- 22 **Guest Lecture: Eric Scharff** — Open Systems: Open Source Environments for the Rest of Us
- 24 **Looking Back** — Reflections of the Course
- 29 **Session 1 of Final Project Presentations.** **Final Report for Projects due at 10:00am**
- ### May
- 1 **Session 2 of Final Project Presentations.**

May 3: Last Day of Classes

Remark: There will be no final exam for this course