

EDSE 610: Designing Adaptive Environments

George Mason University

Assistive Technology Certificate Program

Kellar Institute for Human disAbilities

Fall 2005

Course Description

This course provides an overview of environmental adaptations for persons with disabilities to increase their access to community, workplace, and school activities. The course covers legal issues within the ADA for adapting environments and addresses programmatic and physical access issues. Knowledge and awareness components of this course may be delivered via distance education.

Instructor

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Course Objectives

- ◆ Students will locate resources for adaptive environments.
- ◆ Students will conduct a functional needs assessment of an environment.
- ◆ Students will participate in field experience.
- ◆ Students will work in teams to use universal design to provide adaptive environments within the law of ADA.
- ◆ Students will apply the needs of individual with disabilities when designing adapted environments.

Relationship of Course to Program Goals and Professional Organizations

This course is part of the George Mason University, Graduate School of Education, and Special Education Program for teacher licensure in the commonwealth of Virginia in the special education areas of emotional Disturbance and Learning Disabilities. This program complies with the standards for teacher licensure established by the Council for Exceptional Children, the major special education professional organization. As such the learning objectives for this course cover many of the competencies for curriculum and methods for teaching individuals with emotional disturbances and learning disabilities kindergarten through grade 12.

Council for Exceptional Children's Professional Technology Standards

- 1K1: Concepts and issues related to the use of technology in education and other aspects of our society.
1S3: Describe legislative mandates and governmental regulations and their implications for technology in special education.
5K2: Ergonomic principals to facilitate the use of technology.
5S1: Evaluate features of technology systems.
5S3: Identify the demands of technology on the individual with exceptional learning needs.
7K3: National, state, or provincial PK-12 technology standards.
7S6: Verify proper implementation of mechanical and electrical safety practices in the assembly and integration of the technology to meet the needs of individual with exceptional learning needs.
8S7: Identify placement of devices and positioning of the individual to optimize the use of assistive or instructional technology.
8S8: Examine alternative solutions prior to making assistive or instructional technology decisions.

9K1: Equity, ethical, legal, and human issues related to technology use in special education.

Suggested Text

Olsen, R. V., Hutchings, B. L., & Ehrenkrantz, E. (2000). A house for all children: Planning a supportive home environment for children with disabilities. New Jersey Institute of Technology: Newark, NJ.\$21.95
Ordering information: <http://www.ahouseforallchildren.njit.edu/>

ADAAG Manual: A guide to the Americans with Disabilities Act accessibility guidelines. U.S. Architectural and Transportation Barriers Compliance Board. July 1998.
<http://www.access-board.gov/ada-aba/Blue HTML/ADA-ABA Guidelines Blue.htm>

Course Outline

Saturday, September 10, 2005: **Class & Guest Lecture**

9:30 – 11:00	Syllabus & Intro
11:00 – 12:30	Work-place Accommodations / ADA: Claudia Young
12:30 – 1:30	LUNCH
1:30 – 2:30	Americans with Disabilities Act: Title III
2:30 – 3:30	Fair Housing

Sunday, September 11, 2005: **Guest Lectures and Group Activities**

10:30 - 12:00	Universal Design
12:00 – 1:00	LUNCH
1:00 – 2:00	Housing Project
2:00 – 3:00	Project development & planning

September – December 2005: **Student Research, Planning, and Implementation**
*** schedule 1 meeting time ***

Wednesday, December 14; 4:30 – 7:10 **Student Project Presentations**

Course Requirements

1. **Environmental Applications:** Using principles from the course, students will choose an environment and conduct a functional needs assessment. This project will include identification of accessibility issues, a systematic approach for their resolution, and a visual representation of the specific environment. This can be in a home, school, community, or workplace environment. (30 pts). Due October 30 via e-mail. Title in subject line of e-mail should be “Environmental Application”.

<http://www.wati.org/assessmentforms.htm>

Grading Criteria

- ◆ Identification of issues (10 pts)
- ◆ Systematic Approach & Resolutions (15 pts)
- ◆ Visual representation (5 pts)

2. **Field Study:** Students are complete one of the following field study opportunities below. (15 pts)

Smart House Tour. Call to arrange a tour of the Future Home Project located outside of Baltimore, Maryland. The gentleman who lives there is David Ward. He can be reached at (410) 666-0086 to schedule tours. Going as a group may be a better option for David. Following the tour, prepare a paper that includes 1) your comments, impressions, reflections regarding the tour and 2) a list and explanation of at least 10 modifications viewed at the Future Home. Due: November 8 via e-mail. Title in subject line of e-mail should be “SmartHouse.”

Center for Real Life Kitchen Design. Call to arrange a tour of Virginia Tech's *Center for Real Life Kitchen Design*. This Center has five fully operational kitchen settings. Its purpose is to provide students, researchers, and those in the kitchen design and construction industry the opportunity to learn about new applications of products, materials, and technologies used in residential kitchen design. The person to call for arrangements is JoAnn Emmel at (540) 231-9259. Following the tour, prepare a paper that includes 1) your comments, impressions, reflections regarding the tour and 2) a list and explanation of at least 10 modifications viewed at the Center. Due: November 8 via e-mail. Title in subject line of e-mail should be “Real Kitchen.”

Consultant Shadowing. Contact the instructor to make arrangements to shadow a professional on an adaptive design consult. Following the consult, prepare a paper that includes 1) your comments, impressions, reflections regarding the consult and 2) a list and explanation of modifications viewed or being made at the site. Due: November 8 via e-mail. Title in subject line of e-mail should be “Consultant.”

Independent Site. Students may design their own field experience that is approved by the instructor. Following the experience, prepare a paper that includes 1) your comments, impressions, reflections regarding the experience and 2) a list and explanation of modifications viewed or being made at the site. Due: November 8 via e-mail. Title in subject line of e-mail should be “Independent Site.”

3. **Environmental Assessment:** Students will participate in an environmental design project with the intent to give preliminary information for a design project to be announced in class. Using information given in class: the class speakers, project introduction, Internet research, etc., students will divide into groups to complete the project. Groups will be provided with a sample template for preparing their reports. Groups will also present their reports to the class as a whole the final class session. All information will be combined and submitted to the committee in charge of planning this design project following the last class. (55 pts)

Grading Criteria

- ◆ Research bibliography (15 pts)
- ◆ Report & Literature (30 pts)
- ◆ Presentation (10 pts)

Grading Scale	
100-90	A
89-80	B
79-70	C
Below 70	F