

George Mason University
Assistive Technology Certificate Program
Kellar Institute for Human disAbilities
Summer 2004

EDSE/EDIT 523: Accessibility/ Input Modification
Class Time: 1:00 – 3:40 Class sessions: July 7-16 and Aug 20

Instructor

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Course Description

This course will provide students with an overview of accessibility / input modifications and strategies. Students will explore various input devices, their application, and use by individuals with disabilities. Opportunities for in-depth exploration into sophisticated access technologies will be made available to those students who seek expertise in specific assistive technology devices. Knowledge and awareness components of this course may be delivered via distance education.

Course Objectives

After completing the course, students will:

1. demonstrate use of Mac and PC's standard accessibility software.
2. locate various alternate input options for individuals who have disabilities.
3. examine and evaluate freeware and shareware software for enhancing computer access.
4. implement the use of an input device with an individual.

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

- 1S2: Use technology-related terminology in written and oral communication.
4S1: Identify and operate instructional and assistive hardware, software, and peripherals.
4S2: Provide technology support to individuals with exceptional learning needs who are receiving instruction in general education settings.
5K1: Procedures for the organization, management, and security of technology.

5S1: Evaluate features of technology systems.

7S4: Design, fabricate, and install assistive technology materials and devices to meet the needs of individuals with exceptional learning needs.

8S1: Match characteristics of individuals with exceptional learning needs with technology product or software features.

8S7: Identify placement of devices and positioning of the individual to optimize the use of assistive or instructional technology.

Course Outline

CLASS 1 **Course Introduction** **Tues, July 6** **Modifying Standard Input**

Readings: Chapters 4 – 9; 22-24

- Disability areas
- Input Web
- Standard computer options
- Keyboard modifications
- Mouse modifications
- Software tools

In-Class Assignment: Dvorak tutorial (through Lesson 5)
<http://www.karelia.com/abcd/abcd.html>

CLASS 2 **Exchanging Keyboard & Mouse Input** **Thurs, July 8**

Readings: Chapters 10 – 13; 19

- Keyboards (mini, expanded, ergonomic, etc.)
- Standard mouse options
- Touch screens

In-Class Assignment: Keyboard Activities

CLASS 3 **Using Voice, Eyes, & Head Control** **Mon, July 12**

Readings: Chapters 17, 18, & 20

- Decision Tree (Anson, D. K., 1997)
- Voice Recognition
- Eye-Gaze
- Head Mouse / On-Screen

In-Class Assignment: Case Resolution – Terry; Chap. 24 **or** Elizabeth; Chap. 9

CLASS 4 **Single-Switch Control as Input** **Wed, July 14**

Readings: Chapters 14 – 16

- Switches

- Switch Interface
- Scanning & Morse Code
- Switch Mounts

In-Class Assignment: Case Resolution – Teresa; Chapter 16

CLASS 5
Fri, July 16

Other Control

- Adapted Driving (Ironsides Mobility)
- Environmental Control

- TRACE presentations

Course Requirements

ASSIGNMENT 1: In-Class Assignments (25 points)

Complete the in-class assignments for each of the five class sessions. Assignments will be due at the end of the class session. Each assignment will be worth 5 points for a total of 25.

Product Due: beginning of next class session

ASSIGNMENT 2: Platform ToolKits (35 points)

Review the programs listed in the ToolKit of your choice.

http://trace.wisc.edu/world/computer_access/multi/sharewar.htm
http://trace.wisc.edu/world/computer_access/mac/macshare.html
http://trace.wisc.edu/world/computer_access/win95/win95sha.html

Download it to your computer, play, and be prepared to share it with the class. Create a “cheat-sheet’ on the tool you selected that includes:

Title and description of the program.....	10
Intended audience	5
Sample implementation activities.....	20

Distribute a copy of your 'cheat-sheet’ for each member of the class as you share.

Product Due: Friday, July 16

ASSIGNMENT 3: Input Access & Modification Implementation Project (40 points)

With a ‘real’ person, complete the following computer input implementation project. You are charged with locating appropriate input technologies for a user, learning how to use the technologies, and customizing / implementing /training them to the user. A presentation of your project (using PowerPoint) should include:

Background information on the client	5
Device selection & rationale.....	5
Device demonstration / simulation	10
Device implementation plan	10

You should also be prepared to distribute to each member of the class a one-page project summary & device literature.....10

You may also use one of the scenarios provided in class to complete your implementation project.

Product Due: August 20 (Input class session time 1:00 – 2:10)

Grading Scale

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