PRESENTATION TOOLS

This section of the notebook includes resources that can be used to prepare for and deliver presentations described in previous sections. These supplies include

- **Evaluation Instruments**. One of two evaluations can be selected for use with participants at the end of the session.

- **Projected Visual Templates**. Overhead transparency templates with slides are included on the following pages and are available online at *http://www.uw.edu/doit/MathSci/index_ppt.html*.

- **Videos**. DVDs are included in these materials and streaming videos are available online at *http://www.uw.edu/doit/Videos/*.

- **Handouts**. Photocopy-ready handouts are included in these materials and also online at *http://www.uw.edu/doit/Brochures/publist.html*.

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In this section, you will find two separate evaluation instruments that can be used to gather participant feedback from your presentation.

Presentation Evaluation

Part One: Help us know what you learned as a result of this presentation. Please indicate your agreement or disagreement with these statements where 1= Strongly Disagree, 5= Strongly Agree, and N/A = Not Applicable.

	Strongly Disagree				Strongly Agree	
1. I am better able to find resources at my school to accommodate students with disabilities.	1	2	3	4	5	N/A
2. I gained knowledge about legal obligations relating to students with disabilities.	1	2	3	4	5	N/A
3. I gained knowledge about specific accommodations for students with disabilities.	1	2	3	4	5	N/A
4. I gained knowledge about technology available to support students with disabilities.	1	2	3	4	5	N/A

Please answer the following questions with responses based on today's presentation (as opposed to what you already knew). Describe one thing you learned today about each of the following:

1. Legal issues affecting students with disabilities:

2. Campus services for students with disabilities:

3. Accommodations that can be used for students with disabilities in classes or labs:

Describe additional information you would like to have in order to more fully include students with disabilities in your courses.

<u>Part Two</u>: Please provide input to help us improve our professional development offerings. Please indicate your agreement or disagreement where 1 = <u>Strongly Disagree</u> and 5 = <u>Strongly Agree</u> with the following statements. N/A = <u>Not Applicable</u>.

	Strongly Disagree				Strongly Agree	
■ The facility for this presentation was appropriate.	1	2	3	4	5	N/A
■ The presenter(s) was (were) well prepared.	1	2	3	4	5	N/A
■ Overall, the information presented was useful.	1	2	3	4	5	N/A
■ The pace of the presentation was appropriate.	1	2	3	4	5	N/A
■ The question and answer time was useful.	1	2	3	4	5	N/A
■ The handouts will be useful.	1	2	3	4	5	N/A

1. Which part of the presentation/material was the most useful to you and why?

2. Describe what could make the presentation more useful.

3. To whom would you recommend a workshop on this topic (check all that apply)?
____ Educators
____ Teaching Assistants
____ Administrators
____ Other (please specify):_____

4. The length of the presentation was: about right ____ too short ____ too long ____
   The amount of material was: about right ____ not enough ____ too much ____

<u>Part Three</u>: Please tell us about yourself:

____ Male   ____ Female
____ Educator   ____ Administrator
____ Teaching Assistant   ____ Other

Have you ever provided an accommodation to a student with a disability? Yes__ No___
If yes, please give an example:

Presentation Evaluation

Please indicate your agreement or disagreement with these statements where
1= <u>Strongly Disagree</u>, 5= <u>Strongly Agree</u>, and N/A= <u>Not Applicable</u>.

	Strongly Disagree				Strongly Agree	
■ I am better able to find resources on my campus to accommodate students with disabilities.	1	2	3	4	5	N/A
■ I gained knowledge about legal obligations relating to students with disabilities.	1	2	3	4	5	N/A
■ I gained knowledge about specific accommodations for students with disabilities.	1	2	3	4	5	N/A
■ I gained knowledge about technology available to support students with disabilities.	1	2	3	4	5	N/A
■ The presenter(s) was (were) well prepared.	1	2	3	4	5	N/A
■ Overall, the information presented was useful.	1	2	3	4	5	N/A
■ The handouts will be useful.	1	2	3	4	5	N/A

1. The length of the presentation was: about right ＿＿ too short ＿＿ too long ＿＿

2. The amount of material was: about right ＿＿ not enough ＿＿ too much ＿＿

3. Please tell us about yourself:
    ＿＿ Male   ＿＿ Female
    ＿＿ Educator   ＿＿ Administrator
    ＿＿ Teaching Assistant   ＿＿ Other

Please make specific comments about this presentation on the back of this form.

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In this section, you will find overhead projection templates that can be used to create overhead visuals for your presentations. An electronic copy of these templates can be found at *http://www.uw.edu/doit/MathSci/index_ppt.html.*

Teaching Science and Math to Students with Disabilities

Science and Math Access Objectives

1. Discuss challenges students with disabilities face in gaining and demonstrating knowledge in science and mathematics.

2. List examples of accommodations for students with various types of disabilities in science and mathematics courses.

3. Describe a process for selecting appropriate accommodations.

Challenges for Students with Disabilities:

- gaining knowledge

- demonstrating knowledge

Accommodation Strategies

Factors Influencing the Increased Participation of Students with Disabilities in Postsecondary Education:

- survival rate

- technology

- K-12 special education

- awareness

Accommodation Strategies Objectives

- Learn about the rights, responsibilities, contributions, and needs of students with disabilities.

- Summarize institutional and departmental rights and responsibilities for ensuring equal opportunities.

- List strategies for working with students who have disabilities.

- Describe actions that we can take to ensure that students with disabilities have education opportunities equal to those of their nondisabled peers.

- Describe resources.

"Person with a disability" is any person who:

- has a physical or mental impairment that substantially limits one or more major life activities, including walking, seeing, hearing, speaking, breathing, learning, and working;

- has a record of such an impairment; or

- is regarded as having such an impairment.

Examples of Disabilities

Low Vision

Blindness

Hearing Impairments

Mobility Impairments

Mental Health / Psychiatric Impairments

Health Impairments

Learning Disabilities

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**Accommodations for
Low Vision**

- Seating near front of class

- Good lighting

- Large-print books, handouts, signs, and equipment labels

- TV monitor connected to microscope to enlarge images

- Assignments in electronic format

- Software to enlarge screen images

- Software to adjust screen colors

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Accommodations for
Blindness

- Printed materials in electronic format

- Describe visual aids

- Audio, Braille, or electronic notes and texts

- Raised-line drawings and tactile models of graphic materials

- Braille lab signs, equipment labels; auditory lab warning signals

- Adaptive equipment (e.g., talking thermometers and calculators; tactile timers)

- Computer with optical character reader, voice output, Braille embosser

- Increased time on tests

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Accommodations for Specific
Learning Disabilities

- Note taker and/or audio recorded class sessions

- Captioned videos

- Textbooks in audio formats

- Visual, aural, and tactile instructional demonstrations

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Accommodations for Specific Learning Disabilities, continued

- Course and lecture outlines

- Assignments given in advance

- Computer with speech output, spelling checker, and grammar checker

- Extra exam time, quiet testing arrangements

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Accommodations for Hearing Impairments

- Interpreter, real-time captioning, FM system, note taker

- Captioned videos

- Email

- Visual aids; visual warning system for lab emergencies

- Written assignments, lab instructions, demonstration summaries

- Repeat questions and statements from other students during class

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Accommodations for Mobility Impairments

- Note taker/lab assistant; group lab assignments

- Classrooms, labs, field trips in accessible locations

- Adjustable table; equipment located within reach

- Extra exam time, alternative testing arrangements

- Access to online research resources

- Class assignments and materials in electronic format

- Computer with special input device (e.g., speech input, Morse Code, alternative keyboards)

Accommodations for Health Impairments

- Flexible attendance requirements

- Extra exam time, alternate testing arrangements

- Note takers and/or audio recorded class sessions

- Assignments in electronic format

- Email

- Internet-accessible services and/or resources

Accommodations for Speech Impairments

- Listen carefully to what the person is saying; if you don't understand, ask student to repeat

- Relax and take as much time as necessary to communicate

- Ask questions that require short answers or a nod of the head when appropriate

- Written communication

- Email

Accommodations for Psychiatric Impairments

- Audio recorder, note taker

- Preferential seating near door

- Tests, assignments in alternate formats

- Extended time for taking tests

- Separate, quiet room for testing

- Review academic and behavioral expectations in regular meetings with student

General Suggestions for Making Classes Accessible

- Add a statement to the syllabus inviting students who have disabilities to discuss their accommodation needs.

- Select materials early.

- Talk with student about accommodation needs.

- Have policies and procedures in place.

- Make sure facility is accessible.

- Provide materials in electronic formats.

- Provide clear signage in large print.

- Use alternative methods of administering tests and testing comprehension of a subject.

- Use campus disabled student services as a resource.

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#19

Four-Step Accommodation Model

What does the task or assignment require?

↓

What physical, sensory, and cognitive skills are required?

↓

What components require accommodation?

↓

What accommodation options exist?
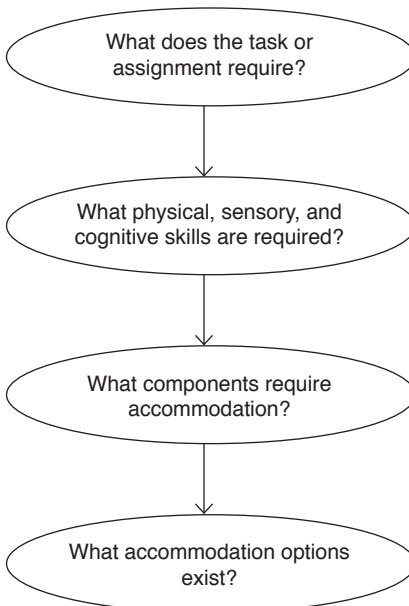
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#20

Four-Step Model

1. What does the task or assignment require?

2. What physical, sensory, and cognitive skills are needed?

3. What components of the task require accommodation?

4. What accommodation options exist?

Physical, Sensory, and Cognitive Issues and Challenges		
Physical Issues Think of the required physical aspects of the task. What will make the environment accessible, keep the student safe, and allow him/her to be an active participant? What equipment must be manipulated?	**Sensory Issues** Think of room temperature, noise, fumes, dust, odors, and allergies. Also consider the ability to speak and/or communicate, and the visual aspects of the task or assignment.	**Cognitive Issues** What memory and communication skills are needed? What is the level of complexity of the task.
Physical Challenges	**Sensory Challenges**	**Cognitive Challenges**
1. lift/carry	1. vision	1. short-term memory
2. stamina/endurance	2. hearing	2. long-term memory
3. push/pull	3. touch	3. task complexity
4. kneel/squat	4. smell	4. reading
5. reach	5. taste	5. writing
6. repetitive tasks	6. oral communication	6. spelling
7. fine motor: pinch/grasp	7. temperature	7. string of numbers (math)
8. fine motor: manipulate/maneuver	8. fumes	8. paying attention
9. gross motor	9. external stimuli	9. visual, auditory, or kinesthetic learner.
10. sit in chair	10. lighting	10. self-esteem/advocacy issues
11. walk/stand	11. other	11. behavior issues/acting out
12. balance		12. other
13. bend/twist		
14. stoop/crouch		
15. other		
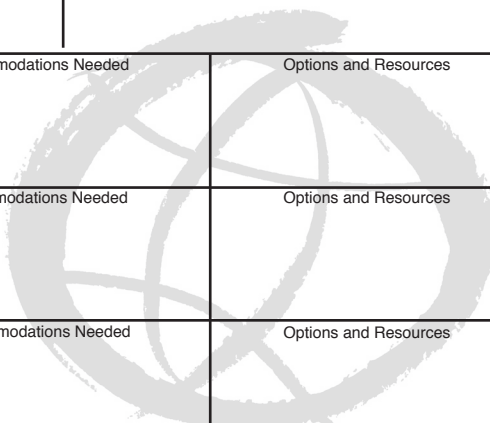
STUDENT ABILITIES PROFILE

Narrative Regarding Student and Accommodation Issues:

Equipment: (Lab equipment, computer, manipulatives)

Environment: (fumes, odors, dust, temperature, noise, group work)

Task / Assignment:

Physical Challenges	Accommodations Needed	Options and Resources
Sensory Challenges	Accommodations Needed	Options and Resources
Cognitive Challenges	Accommodations Needed	Options and Resources

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Universal Design of Instruction

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Universal Design of Instruction Objectives

1. Discuss the principles of universal design.

2. Apply principles of universal design of instruction to meet a wide range of student learning needs.

3. Explain the difference between employing universal design principles to maximize access and providing academic accommodations for students with disabilities.

Diversity in Postsecondary Institutions

- Ethnic/racial minorities

- English as a second language

- Different learning styles

- People with disabilities

Universal Design =

"The design of products and environments to be usable by all people, without the need for adaptation or specialized design."

Center for Universal Design at North Carolina State University

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Principles of Universal Design

- Equitable use

- Flexibility in use

- Simple and intuitive use

- Perceptible information

- Tolerance for error

- Low physical effort

- Size and shape for approach and use

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Universal Design of Instruction Examples

- Create an environment that respects and values diversity. Put a statement on your syllabus inviting students to meet with you to discuss disability-related accommodations and other learning needs.

- Ensure that all classrooms labs and fieldwork are in locations accessible to individuals with a wide range of physical abilities and disabilities.

- Use multiple modes to deliver content (including lecture, discussion, hands-on activities, Internet-based interaction, and fieldwork).

- Provide printed or web-based materials, which summarize content that is delivered orally.

- Face the class and speak clearly.

- Use captioned videos.

Universal Design of Instruction Examples, continued

- Provide printed materials in electronic format.

- Use accessible web pages (text descriptions of graphics).

- Provide printed materials early so that students can prepare to access the materials in alternate formats.

- Create printed and web-based materials in simple, consistent formats.

- Provide effective prompting during an activity and feedback after the assignment is completed.

- Provide multiple ways for students to demonstrate knowledge.

- Make sure equipment and activities minimize sustained physical effort.

Making Classroom Activities
Accessible to Everyone

- Class lectures

- Classroom discussions

- Internet resources

- Videos

- Course handouts

- Computer and science labs

- Field experiences

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Procedures and Outcomes

Instructional Procedures:

1.   Students will use...

    to acquire the course content.

2.   I will use...

    to present course content.

Instructional Content:

1.   Students will describe…

2.   Students will be able to list…

3.   Students will demonstrate…

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Measuring Instructional Content Versus Procedures

1.   Evaluation Content:
Students will demonstrate their understanding of...

2.   Testing Procedure:
Students will demonstrate their understanding by...

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#33

What barriers to the activity exist for students with the disability your group was assigned?

What accommodation options exist to overcome those barriers?

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#34

Fingerprint Accommodations

Visual Impairments
- Position, lighting, and seating needs of student
- Large print, Braille, or electronic handouts and worksheets
- Scanner to create large images
- Clear description of visual aids
- Tactile accommodations

Hearing Impairments
- Sign language interpreter or FM system
- Visual aids
- Clear written directions
- Position and seating (needs to see the instructor/demonstration)
- Instructor communication

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Fingerprint Accommodations, continued

Mobility Impairments
- Accessible work space, adjustable tables
- Work with partner

Learning disabilities/ attention deficit disorders
- Multi-modal directions
- Minimize distractions when possible
- Break directions and activity into chunks

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M&Ms Ratio Accommodations

Visual Impairments
- Position, lighting, and seating needs of student
- Large print, Braille, or electronic handouts and worksheets
- Talking calculator
- Magnifying glass
- Alternative manipulatives

Hearing Impairments
- Sign language interpreter or FM system
- Visual aids
- Clear written directions
- Position and seating (needs to see the instructor/ demonstration)
- Instructor communication

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M&Ms Ratio Accommodations, continued

Mobility Impairments
- Computer-based accommodations
- Larger manipulatives
- Tray to hold manipulatives
- Work with partner

Learning Disabilities/Attention Deficit Disorders
- Multi-modal directions
- Computer-based accommodations
- Reorganize format of documents
- Minimize distractions when possible
- Talking calculator
- Break directions and activity into chunks

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Surface Area and Volume Accommodations

Visual Impairments
- Position, lighting, and seating needs of student
- Large print, Braille, or electronic handouts and worksheets
- Talking calculator
- Magnifying glass
- Alternative manipulatives

Hearing Impairments
- Sign language interpreter or FM system
- Visual aids
- Clear written directions
- Position and seating (needs to see the instructor/demonstration)

**Surface Area and Volume Accommodations,
continued**

Mobility Impairments
- Computer-based accommodations
- Larger manipulatives
- Tray to hold manipulatives
- Work with partner

Learning Disabilities/ Attention Deficit Disorders
- Multi-modal directions
- Computer-based accommodations
- Reorganize format of documents
- Minimize distractions when possible
- Talking calculator
- Break directions and activity into chunks

Information Access

Information Access Objectives

1. Describe ways that information is presented in postsecondary institutions.

2. Discuss the challenges each mode of information delivery creates for people with different types of disabilities.

3. List solutions to the barriers students with disabilities typically face when obtaining information in academic settings.

Academic Context of Information Access

- Classroom work

- Labs

- Homework

- Library

- Web resources

- Distance learning

Information Access can be a Challenge For People with:

- Visual impairments

- Hearing impairments

- Mobility impairments

- Speech impairments

- Health impairments

- English as a second language

- Alternative learning styles

Section 504 of the Rehabilitation Act of 1973

"No otherwise qualified individual with a disability shall, solely by reason of his/her disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity of a public entity."

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Access Challenges

- Spoken word

- Printed word

- Video/televised information

- Audio recorded information

- Computer-based information

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Access Issues and Solutions

Problem		Solution
access to computers	⟶	adaptive technology
access to electronic resources	⟶	universal design principles

Making Computing Labs Accessible to Everyone

Making Computer Labs Accessible to Everyone Objectives

1. Describe the legal rights of students with disabilities as they relate to computer access.

2. Tell how universal design principles can be used to develop computer services that are accessible to all students.

3. Discuss steps to be taken to ensure that students with disabilities have access to campus computer labs.

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Make Sure Computer Lab Users can:

■ get to the facility and maneuver within it;

■ access materials and electronic resources; and

■ make use of equipment and software.

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Adaptive Technology Considerations

- Adjustable tables

- Large-print key labels

- Screen-enlargement software

- Large monitors

- Speech output

- Braille conversion

- Trackballs, wrist rests, and keyguards

- Ergonomic keyboards

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#51

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Access to Computers for Students with Disabilities

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#52

Access to Computers Objectives

1. Describe the legal rights of students with disabilities as they relate to computer access.

2. Summarize the issues, needs, and concerns of people with disabilities in accessing electronic resources.

3. Describe common types of adaptive technology for students with disabilities.

4. Discuss strategies to plan and implement adaptive technology capabilities for campus computer labs/workstations.

Computers Assist People with:

- Low vision

- Blindness

- Hearing impairments

- Speech impairments

- Specific learning disabilities

- Mobility impairments

- Health impairments

Low Vision

- large-print signs, handouts, labels

- good lighting

- large-print key labels

- large monitors

- software to enlarge screen images

- software to adjust screen colors

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Blindness

- Brailled and audio-recorded materials

- Braille labels

- computers with voice output

- Braille screen displays

- scanners and optical-character recognition

- Braille printers

- Internet-accessible services/resources

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Hearing and Speech Impairments

- computers with visual output

- email

- speech synthesizers

Learning Disabilities

- accessible technology provides multi-sensory experiences

- speech input/output

- spelling checkers, thesauruses, and grammar checkers

- word-prediction software

- large-print displays and alternative colors on the screen

Mobility Impairments

- adjustable tables

- keyboard modifications

- keyboard guards and layouts

- alternative keyboards and mice

- Internet-accessible services/resources

Health Impairments

- email

- Internet-accessible services/resources

Adaptive Technology

- hardware/software

- easy/difficult to implement

- easy/difficult to use

- inexpensive/expensive

- generic/unique

- stand-alone/networked

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#61

Getting Started!

- adjustable tables

- large-print key labels

- screen-enlargement software

- large monitors

- speech output

- Braille conversion software and printer

- trackballs, wrist rests, keyguards

DO·IT

#62

Universal Design of Web Pages

Universal Design of Web Pages Objectives

1. List potential barriers to accessing information on web pages for students with disabilities.

2. Describe the institution's legal responsibility to ensure access to information presented on web pages.

3. Describe universal design guidelines for developing accessible web pages.

Some Internet Visitors:

- cannot see graphics.

- cannot hear audio.

- have difficulty with unorganized sites.

- use older equipment with slow connections.

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ADA and the Internet

"Covered entities that use the Internet for communications regarding their programs, goods, or services, must be prepared to offer those communications through accessible means as well."

—United States Department of Justice (ADA Accessibility,1997)

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Provide Multiple Means of:

- representation

- expression

- engagement

"The power of the web is in its universality. Access by everyone regardless of disability is an essential aspect."

—Tim Berners-Lee, World Wide Web Consortium

Web Page Development Accessibility Options:

1.   Avoid inaccessible data types and features.

2.   Create alternative methods/formats.

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Example of a Web Accessibility Statement

"The DO-IT pages form a living document and are regularly updated. We strive to make them universally accessible. You will notice that we minimize the use of graphics and photos, and provide descriptions of them when they are included. Video clips are open captioned, providing access to users who can't hear the audio. Suggestions for increasing accessibility of these pages are welcome."

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Test Your Web Pages:

- with different operating systems and monitors.

- with different browsers and with audio and graphics-loading features turned off.

- with a text browser.

- with an accessibility testing program (e.g., Bobby).

- by accessing the keyboard alone.

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#71

Policy Guidelines

- Disseminate information

- Train

- Support

- Enforce or reward

- Evaluate and revise

DO·IT

#72

Universal Design of Distance Learning

Universal Design of Distance Learning Objectives

1. List potential barriers to distance learning courses for students with disabilities.

2. Describe educators, staff, and institutional roles and responsibilities for ensuring equal access to distance learning courses.

3. Discuss universal design guidelines for developing accessible distance learning courses.

Accessibility Indicators for Students

1. The distance learning home page is accessible to individuals with disabilities (e.g., it adheres to Section 508, World Wide Web Consortium, or institutional accessible-design guidelines/standards).

2. A statement about the distance learning program's commitment to accessible design for all potential students, including those with disabilities, is included prominently in appropriate publications and websites along with contact information for reporting inaccessible design features.

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Accessibility Indicators for Students, continued

3. A statement about how distance learning students with disabilities can request accommodations is included in appropriate publications and web pages.

4. A statement about how people can obtain alternate formats of printed materials is included in publications.

5. The online and other course materials of distance learning courses are accessible to individuals with disabilities.

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Accessibility Indicators for Distance Learning Designers

6. Publications and web pages for distance learning course designers include:
   a. a statement of the program's commitment to accessibility,
   b. guidelines/standards regarding accessibility, and
   c. resources.

7. Accessibility issues are covered in regular course designer training.

Accessibility Indicators for Distance Learning Instructors

8. Publications and web pages for distance learning instructors include:
   a. a statement of the distance learning program's commitment to accessibility,
   b. guidelines/standards regarding accessibility, and
   c. resources.

9. Accessibility issues are covered in training sessions for instructors.

Accessibility Indicators for Program Evaluators

10. A system is in place to monitor the accessibility of courses, and, based on this evaluation, the program takes actions to improve the accessibility of specific courses as well as update information and training given to potential students, current students, course designers, and instructors.

Distance Learning Tools

- Email

- Real-time "chat"

- Web pages

- Teleconferencing

- Printed materials

- Videos