Equal Access: Universal Design of Physical Spaces

A checklist for designing spaces that are welcoming, accessible, and usable
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As increasing numbers of people with disabilities pursue educational opportunities at all levels, the accessibility of campus facilities and physical spaces increases in importance. The goal is simply equal access; everyone who visits your campus should be able to do so comfortably and efficiently.

Legal Issues

The Architectural Barriers Act of 1968 requires that "buildings and facilities that are designed, constructed, or altered with Federal funds, or leased by a Federal agency, comply with Federal standards for physical accessibility" (United States Department of Justice, 2005, p. 19).

Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, and the Americans with Disabilities Act Amendments of 2008 prohibit discrimination against individuals with disabilities. According to these laws, no otherwise qualified person with a disability shall, solely by reason of his or 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. This means that physical spaces should be accessible to qualified students with disabilities.

Universal Design

To make your department or institution welcoming and accessible to everyone, employ principles of universal design (UD). Universal design means that rather than designing your facility and services for the average user, you design them for people with a broad range of abilities, ages, reading levels, learning styles, languages, cultures, and other characteristics. Keep in mind that students, staff, faculty, and visitors may have characteristics that are not defined as disabilities, but may limit their ability to access physical spaces or information. These people could be short, tall, poor readers, left-handed, or speak a different language. Preparing your campus to be accessible to them will make it more usable by everyone and minimize the need for special accommodations. Make sure everyone

- feels welcome
- can get to facilities and maneuver within them,
- is able to fully benefit from resources and courses, and
- can make use of equipment and software.

A Process for Universal Design

Key considerations to address when applying UD to a physical space at an institution of higher education are to plan ahead and to keep in mind the diversity of the campus community at all stages of a project. The following steps outline a process for the application of UD to physical spaces.

1. *Identify the space.* Select a physical space (e.g., a student union building, dormitory, theater, athletic facility, classroom, or science lab). Consider the purpose of the space, location, dimensions, budget, and other issues that affect design.

2. *Define the universe.* Describe the overall population and then consider the diverse characteristics of potential members of the population who might use the space (e.g., students, staff, faculty, and visitors with diverse characteristics with respect to gender, age, size, ethnicity and race, native language, learning style, and abilities to see, hear, manipulate objects, read, and communicate).

3. *Involve consumers.* Consider and involve people with diverse characteristics (as identified in Step 2) in all phases of the development, implementation, and evaluation of the space. Also gain the perspectives of potential users through diversity programs such as the campus disability services office.

4. *Adopt guidelines or standards.* Review research and practice to identify the most appropriate practices for the design of the type of space identified in Step 1. Identify universal design strategies to integrate with these best practices in architectural design.

5. *Apply guidelines or standards.* Apply universal design strategies in concert with other best practices identified in Step 4 to the overall design of the physical space (e.g., aesthetics, routes of travel) and to all subcomponents of the space (e.g., signage, restrooms, and sound, fire, and security systems).

6. *Plan for accommodations.* Identify processes to address accommodation requests by individuals for whom the design of the space does not automatically provide access (e.g., cafeteria staff members should know how to assist customers who are blind).

7. *Train and support.* Tailor and deliver ongoing training and support to staff who manage the physical space. Share institutional goals with respect to diversity and inclusion and practices for ensuring welcoming, accessible, and inclusive experiences for everyone using the space. Explain the reasoning behind design decisions so that design integrity is maintained over time (e.g., make sure that staff know not to configure furniture in such a way that it creates physical barriers to wheelchair users).

8. *Evaluate.* Include universal design measures in periodic evaluations of the space, evaluate the space with a diverse group of users, and make modifications based on feedback. Provide ways for ongoing input to occur (e.g., through online and printed instruments and signage that requests suggestions from facility users).

Guidelines and Examples

Following are examples within categories where universal design can be applied to a physical space at your institution. This content does not provide legal advice. To help clarify legal issues, consult your campus legal counsel or ADA/504 compliance officer or call your regional Office for Civil Rights (OCR).

Planning, Policies, and Evaluation
Consider diversity issues as you plan and evaluate spaces.
— Do you have policies and procedures that ensure access to facilities, printed materials, computers, and electronic resources for people with disabilities?
— Is accessibility considered in the development process?
— Do you have a procedure to ensure a timely response to requests for disability-related accommodations?
— Are disability-related access issues addressed in your evaluation methods?

Appearance
Make decisions that foster a campus climate that is inclusive of all students, staff, faculty, and visitors.
— Are people with diverse characteristics, including various types of disabilities, included in the planning process?
— Is the environment appealing and welcoming to those with a broad range of cultures, ages, abilities, and other characteristics?

Entrances and Routes of Travel
Make physical access welcoming and accessible to people with a variety of abilities, genders, and ages.
— Are there convenient, wheelchair-accessible parking spaces and routes of travel to facilities and within facilities?
— Are entryways sheltered?
— Are outdoor lights with motion sensors installed near entrances?
— Do sensors automatically open exterior doors?
— Are lever handles rather than knobs used for doors?
— Are gently sloping walks integrated into the design rather than steps and ramps that segregate individuals with physical disabilities?

— Are there are ample high-contrast, large-print directional signs to and throughout the physical space?
— Is adequate lighting available?

Consult the *ADA Checklist for Readily Achievable Barrier Removal*[1] for more suggestions. For computing facilities, consult *Equal Access: Universal Design of Computer Labs* video and publication.[2]

Fixtures and Furniture
Provide fixtures and furniture that can be used by all employees, students, and visitors.
— Are fixed or fold-down seats available in showers?
— Are levers installed for sink handles?
— Are mirrors, sinks, and towel dispensers located so they are usable by individuals with a wide range of body sizes from standing or seated positions?
— On appliances and other equipment, are front-mounted, easy-to-operate controls with labels in large, high-contrast print used?
— Do electrical outlets and light switches (with dimmers) allow access from standing or seated positions?
— In classrooms, are furniture and fixtures adjustable in height and allow for flexible arrangements of different learning activities and student groupings?

Information Resources and Technology
If your physical space uses computers as information resources, ensure that systems employ accessible design, that staff members are aware of accessibility options, and systems are in place to make accommodations.
— Do publications allow access from standing and seated positions?
— Are directional and information kiosks reachable from standing and seated positions?
— Do vendors provide accessibility features (e.g., captioned video, compatibility with assistive technology) in computers and software?
— Are adjustable-height tables used at each type of workstation to assist students who use

wheelchairs or are small or large in stature?
— Is adequate work space provided for both left- and right-handed users?
— For those who have difficulty controlling a mouse, are trackballs available?
— Are staff members aware of accessibility options (e.g., enlarged text feature) included in computer operating systems and of assistive technology available in the facility?
— Have procedures been put in place for a timely response to requests for assistive technology?

Note that your organization need not have special technology on hand for every type of disability but should have available assistive technology that can benefit many people. For more information about assistive technology consult the videos and publications.[3]

Safety
Design spaces to minimize risk of injury.
— Are nonslip walking surfaces used?
— Have emergency systems been installed that incorporate audio and visual warnings?
— Are aisles wide and clear of obstructions for the safety of users who have mobility or visual impairments?

Accommodation
Develop a system for staff to address accommodation requests by individuals for whom the space design does not automatically provide access.
— Are procedures in place for requesting disability-related accommodations in signage, publications, and information kiosks?
— Do facility staff members know how to respond to requests for disability-related accommodations?

Checklist Updates
To increase the usefulness of this working document, send suggestions to *sherylb@uw.edu*.
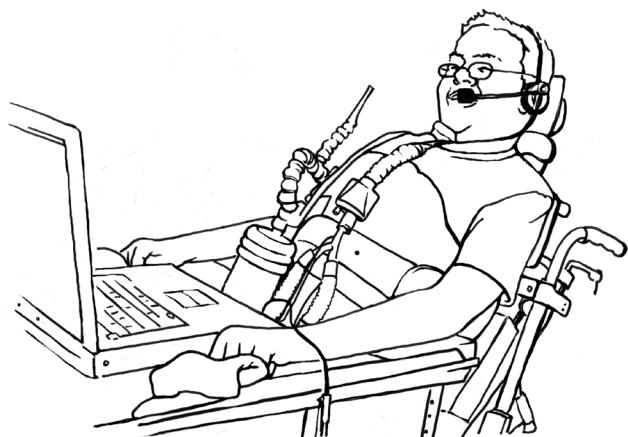
Additional Resources

An electronic copy of the most current version of this publication as well as additional useful brochures can be found online.[4] For more information about applications of universal design, consult *The Center for Universal Design in Education*.[5] The book *Universal Design in Higher Education: From Principles to Practice* published by Harvard Education Press shares perspectives of UD leaders nationwide. To receive a 20% discount, visit the DO-IT website.[6]

References

Burgstahler, S., & Cory, R. (Eds.). (2008). *Universal design of higher education: From principles to practice*. Boston: Harvard Education Press.

United States Department of Justice. (2005) *A guide to disability rights laws*.[7] Washington, DC: U.S. Department of Justice Civil Rights Division.

Cited Web Resources

1. *www.ada.gov/checkweb.htm*
2. *www.uw.edu/doit/Video/equal.html*
3. *www.uw.edu/doit/Resources/at.html*
4. *www.uw.edu/doit/Brochures/*
5. *www.uw.edu/doit/CUDE/*
6. *www.uw.edu/doit/UDHE/coupon.html*
7. *www.ada.gov/cguide.pdf*

About DO-IT

DO-IT (Disabilities, Opportunities, Internetworking, and Technology) serves to increase the success of individuals with disabilities in challenging academic programs and careers, such as those in science, engineering, mathematics, and technology. Primary funding for DO-IT is provided by the National Science Foundation, the U.S. Department of Education, and the State of Washington.

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