AD-AS Equity 1317

Return to Desk : Workstations

This bi-level computer workstation by AD-AS Furniture Solutions offers independent adjustment for the keyboard and monitor surfaces. Separate hand cranks adjust each work surface independently and retract completely out of the users' way. Its wheelchair accessible height ranges make it ideal in any K-college environment for students of all ages, sizes, and abilities. Almond powder-coated steel base.

Work surface dimensions: 48 in. x 13 in. front, 48 in. x 17 in. back
Adjustment Range: 23-34 inches

ADA compliant for wheelchair users. These designs offer flexibility for a wide range of physical abilities and impairments. It is what many interior space planners call "universal design" - a logical approach to workspace design that meets the needs of everyone. It calls for design adapting to people, not the other way around. We offer desks, workstations, and rehad dining tables that can easily be adjusted in height.. Many of these tables ship within 7-10 days. Shipping charges will be applied to your account or credit card at time of shipment.

Research Methods and Data Collection Techniques

I visited 20 computer labs on the campus and using the recommended guidelines set forth by the ADA, and through observation and interviews with lab facilitators/coordinators. Using ADA recommended guidelines concerning computing facilities, I compared each facility against these guidelines for compliance. There were height and depth guidelines for workstations, as well as width guidelines for aisles. I used a steel tape measure at random workstations and aisles to check for compliance. All data collected was recorded in a field notebook.

There are also hardware and software recommendations for people with mobility, visual, hearing, and speaking impairments. What I did not see through direct observation, I then interviewed the lab assistants on duty. These lab assistants are students trained primarily on the hardware and software programs contained in each lab where they work. The lab assistants are troubleshooters for students when needed and have no specialized training or knowledge in the area of ADA requirements about computing facilities.

Recommended ADA Guidelines

I worked with a total of twelve recommended ADA guidelines for computing facilities that were supplied to me by the Department of Disability

Services of UNC Wilmington (See appendix A). Although based on ADA recommendations, a body of several regional universities in the United States adopted the guidelines presented here. These guidelines were the collective "measuring stick" to see how UNC Wilmington rated among the 20 computer labs visited over a period of three days. These guidelines begin by saying that in labs of fewer than 25 computer workstations one must be accessible. In this sampling there were 10 labs with fewer than 25 workstations. The term *accessible* encompasses twelve distinct elements.

1. To be accessible a station must have screen reader software. I found this software in two specific places on campus, the first place being Disability Services located in Hoggard Hall. The second location is Media Services in Randall Library that is primarily an audio/video room for student use.

2. The station must also have ADA supportive hardware and software. This would be in the form of screen magnification software and specific hardware for those with mobility, visual, auditory, and speech impairments (assistive technology). Only three locations on campus have either this hardware or software, one of which is not a general access computer lab. King Hall 201 within the Watson School of Education is reserved for the exclusive use of Education students. Lab 201 has vision and mobility assistive technology hardware incorporated into two of its computers. Randall Library has an Information Technology Systems Division (ITSD) laptop equipped with an opti-scanner for those with vision impairments. Disability Services located in Hoggard Hall, as well as Media Services in Randall Library, both have the Kurzweil screen reader software for those with vision impairments.

3. A sound card is also required for systems to meet the guideline for those with hearing impairments. I found that every computer on campus is equipped with sound capability, however, only restricted access labs tend to be equipped with speakers to access this sound capability. For example, all computers in both labs within the Watson School of Education are equipped with speakers whereas; all general access computers located inside the residence halls on campus are not.

4. The workstation surface must be as least 30 inches from the floor with a height clearance of 29 inches. I found through my research that most labs do not meet the height clearance recommendation, although several have workstation tables that can be adjusted in height to easily satisfy this guideline. Currently, some are only missing the mark by as little as perhaps a quarter of an inch to half

an inch. A workstation in 201 King Hall does, however, have a workstation for disabled students by way of an adjustable height table risen high enough for a wheelchair to easily pass underneath it. This particular workstation could in fact be too high perhaps, for a person in a wheelchair but again, it could be easily lowered to the desired height.

5. A depth clearance of at least 20 inches is also recommended. Every lab but one, Kenan Hall, soundly meets the depth requirement of at least 20 inches.

6. Another guideline is that utility and equipment controls must be within easy reach. If a wheelchair can easily maneuver through the aisles and assume a workstation, then the controls and external devices are usually within reach.

7. Each lab should have clear aisles with a recommended 5-foot width sufficient for a wheelchair to maneuver. I found at times either total compliance, partial compliance or zero compliance in this dimension. If there was partial compliance that meant that some aisles were at least 5' wide while the others were less. The main aisle or aisles may have been in compliance while the entrance into the lab may have been obstructed or too narrow. Chairs can take up maneuvering room of wheelchairs, even in aisles that were sufficient in width. Aisle width was measured across from table to table or at the two narrowest points, and then the two widest points.

8. Computer monitors are suggested to be at least 17 inches or larger. Six computer labs, mostly in the residential areas, were found to have monitors less than 17 inches.

9. The ADA guidelines also suggest that labs with 25 or more workstations must contain at least *three* that are accessible.

Among these three stations *one* must be enhanced with the following additional features along with those previously mentioned:

10. A closed circuit television-magnification system

11. A scanner and,

12. Voice recognition software

Of the eight labs in this study with twenty-five or more workstations, none of them contain a completely enhanced workstation with these features. I finally looked at

the overall picture of accessibility, such as the physical structure of the building itself. Does the building have handicapped access in the form of ramps and elevators? Some of the labs in this study are located on the upper floors in certain buildings. Doors in particular are of concern for those in wheelchairs and those with mobility problems. Some doors have secured access meaning that a card swipe must be used to gain entry. Some of the doors are thick and heavy making them difficult to open, while others may be narrow.

The guidelines presented here make no mention of recommended door widths, although it may be included in general building codes. Are there obstacles that permit entry or ease of movement such as support columns, cables taped to the floor, and/or furniture obstructions? Asterisks on the chart included in this report represent any special issues or concerns noteworthy of clarification. (See Appendix A)

UNC Wilmington's Environmental Safety Officer, Mr. Stanley Harts, was interviewed with regard to Occupational Safety and Health Administration (OSHA) enforcement of ADA standards. According to Harts, North Carolina had previously intended to be the first state in the nation to release mandatory standards for persons with disabilities. The proposal received substantial dissention with the federal government and was therefore rejected. This proposal also addressed computing workstation ergonomics concerns. Ergonomics means the physical dimensions, layout, setup, etc., of workstations for people with disabilities. He also said that there is also a lot of controversy with the federal legislators concerning mandatory ADA guidelines. Therefore, State and Federal elected officials are currently "deadlocked" with regard to passing any legislation on this issue.

Harts also noted that North Carolina is what is referred to as an "Agreement State", meaning that it has "agreed" to operate its own Department of Occupational Safety and Health Administration. Our state OSHA department is a sub-division of the North Carolina Department of Labor. The current Labor Secretary, Mr. Harry Payne Jr., has publicly stated that if the federal government passes mandatory legislation concerning the ergonomics of ADA workstations, he will have those regulations in place before he leaves his office.

What follows next is a brief overview of the current condition of each computer lab visited on the campus of UNC Wilmington during this needs assessment.

Bear Hall

This lab is one of eleven labs operated by Student Micro Computing Facilities within the Information Technology Systems Division. It is located at 202 Bear Hall and falls under the direct supervision of computer lab coordinator, Mr. Chet Harvey. The workstations in this lab did not meet the recommended standard for height. Some aisles

did not meet the recommended width guideline. The printer would be inaccessible due to an aisle that was found to be too narrow. Because this lab is on the second floor, students in wheelchairs must use the elevator to gain access. Therefore, access relies on the elevators being operational 24 hours a day. If the elevator fails, students cannot access the second floor.

Bear Hall (Technology Classrooms)

The College of Arts and Sciences maintain these labs. The lab coordinator is Mr. Bill Ellegood. I interviewed Mr. Ellegood in his office in reference to all three technology labs under his control. He said that he has 100% accessibility in one of his labs with 20 workstations. In two of his labs, 23 out of 35 workstations are accessible. I was unable to physically inspect three out of the four labs due to classes, but I did manage to tour one of the labs with him, room 164. Some obstacles, particularly an overhead projector at the very entrance of the classroom may cause a person in a wheelchair some difficulty. Once this narrow space was cleared, there seemed to be plenty of clearance to maneuver.

Room 202 is the larger teaching classroom with 28 pc stations. Once inside the lab is very spacious, as it is not configured in aisles, per se. There is a narrow clearance obstructed by chairs to get to the printers. There are cables in the floor between the instructors workstation and tutor station #6. The height guidelines are not met in this lab. Normal access to both labs depends on the use of an elevator.

Labs with fewer than 25 workstations must have one accessible workstation. Labs with 25 or more workstations must have
three accessible workstations, including one enhanced workstation. >**Bold face** represents more than 25 workstations. Chart
reflects both general access labs and restricted labs for respective department majors only.

General Access labs < 25 **>25** Restricted labs < 25 **Restricted labs > 25**

	Belk	Galloway	Graham	Honors	International	Schwartz	**Randall**	Graduate	Ins Services	Kenan	Media Serv	Morton	Union	**Soc Behav**	**Bear Gen**	**Bear 164**	**Cameron**	**Dobo**	**Hoggard**
# Of Work stations	9	10	6	5	8	18	**49**	12	15	9	1	20	22	**25**	**25**	**35**	**50**	**35**	**28**
Screen reader software											x					*			
ADA supportive hardware and software																**x**			
Sound card	x	x	x	x	x	x	**x**	x	x	x	x	x	x	**x**	**x**	**x**	**x**	**x**	**x**
Height clearance of 29" (workstation)																			
Depth clearance of 20" (workstation)	x	x	x	x	x	x	**x**	x	x		x	x	x	**x**	**x**	**x**	**x**	*	**x**
Controls within easy reach	*	x	x	*	*	x	**x**	x	*		x	x	x	**x**	**x**	**x**			
Clear 5' aisles	*	na	*	*	*	x	**x**	na			na	na	x			**x**	*	*	
17" or larger monitor	x			x	x		**x**	x	x		x			**x**	**x**	**x**	**x**	**x**	**x**
>25 stations If so:			x		x		**x**									**x**	**x**	**x**	**x**
CCTV magnification system																			
Scanner											x								
Voice recognition software																*			
Lab easily accessible i.e. building, doors, Peripherals, etc.	*		*		x		**x**	*	*		*		x	*	*	**x**	**x**	*	

Ergogenesis BodyBilt 3500 Series Executive Ergonomic Chair

The 3500 Series Office Chair **is the elite of BodyBilt models. Complete with headrest, this model offers not only unparelleled support, but a luxuriously supportive reclining feature, well suited for telephone work, and interviewing.**

Product Features:

- Large (22" long x 21.5 wide) backrest
- Backrest angle adjustment
- Backrest height adjustment (4" height range)
- Seat tilt adjustment
- Seat height adjustment (5.5" range)
- Seat tilt tension control

- Swivel (360" range)
- K-style adjustment mechanism (allows for free-floating recline)
- Black 26" (core diameter) five star base

The Pivot! Arm adds a second pivot point to the standard armrest, giving you the ability to widen the arms, even better, bring them right in close to you, so you can let can relax back in your chair, and have those armrests right there with you. For those doing a lot of typing, mousing, or computer work, an even better solution may be the S'Port Pivot.

BodyBilt Quickship Fabrics:
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X = Compliance with guideline

* = Partially meets guideline, occasionally meets guideline, or further explanation forthcoming

na = Not Applicable