

CMPE 80A: Universal Access: Disability, Technology, and Society



Laws



Main Legislation

- ▶ Rehabilitation Act of 1973 (as amended)
- ▶ Americans with Disability Act (ADA) of 1990
- ▶ Individuals with Disability Education Act (IDEA) Amendments of 1997
- ▶ Telecommunications Act of 1996
- ▶ Fair Housing Act of 1988
- ▶ Air Carrier Access Act
- ▶ Assistive Technology Act of 1998
- ▶ Medicaid
- ▶ Medicare



Rehabilitation Act

- ▶ Prohibits discrimination on the basis of disability in programs conducted by Federal agencies, in programs receiving Federal financial assistance, in Federal employment, and in the employment practices of Federal contractors (Sec. 504)
- ▶ Mandates reasonable accommodation in employment and secondary education when receiving federal funding
 - Resulted in architectural changes on campuses and work settings (elevators, ramps, voice and Braille labels)
- ▶ Requires that each state include a provision for AT in each vocational rehabilitation plan
- ▶ Sec. 508 ensures access to electronic office equipment (including IT and telecommunications) to persons with disabilities working for the federal government



Rehabilitation Act

- ▶ Authorizes **funding for the states** to provide rehabilitation services for people with disabilities to prepare for, engage in, or retain gainful employment. These services include:
 - Evaluation
 - Counseling
 - Training
 - Placement
 - Rehab technology services
- ▶ Defines Rehabilitation Technology as *“the application of technologies, engineering methods, or scientific principles to meet the needs of, and address the barriers confronted by, individuals with disabilities”*.
 - Rehabilitation engineering
 - Assistive technology devices
 - Assistive technology services



Vocational Rehabilitation

- ▶ Vocational Rehabilitation (VR) is administered through state rehab agencies (federal-state partnership)
- ▶ Operates at the case services level through a Individual Plan for Employment (IPE)
 - Contract between service provider and recipient
 - Must include the provision of rehab technology services to assist in the implementation of intermediate and long-term goals, where it is found appropriate
- ▶ Some individuals are deemed ineligible for VR service because:
 1. they don't have vocational goals or
 2. VR does not believe it can help them
 - In this case, they may use Independent Living services (funded by the Rehab Act)

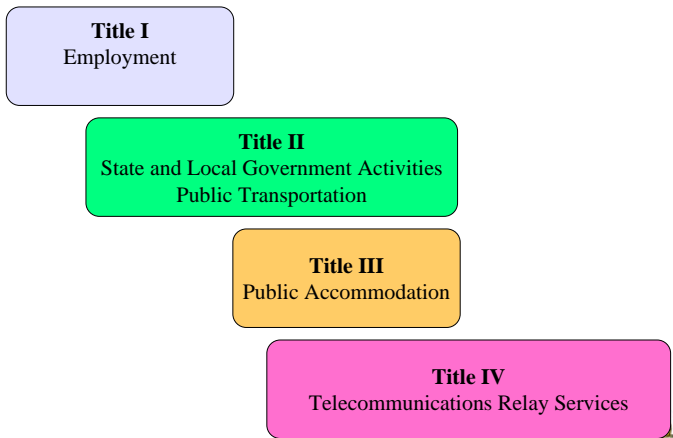


American with Disability Act (ADA)

- ▶ <http://www.ada.gov>
- ▶ The ADA prohibits discrimination on the basis of disability in:
 - Employment
 - State and local government
 - Public accommodations
 - Commercial facilities
 - Transportation
 - Telecommunications
- ▶ A person is considered disabled if s/he:
 - has a physical or mental impairment that substantially limits a major life activity, or
 - has a record of such an impairment, or
 - is regarded as having such an impairment



ADA Titles



ADA Title I - Employment

- ▶ Requires employers with 15+ employees to provide qualified individuals with disabilities an equal opportunity to benefit from the full range of employment-related opportunities available to others.
 - Prohibits discrimination in recruitment, hiring, promotions, training, pay, social activities
 - Restricts questions that can be asked about an applicant's disability before a job offer is made
 - Requires reasonable accommodation to the known physical or mental limitations of otherwise qualified individuals with disabilities, unless it results in undue hardship
 - ADA does not require preferential treatment for people with disabilities!
 - Qualification goes first!



ADA Title II State and Local Gov't Activities

- ▶ Covers all activities of State and local governments
 - Regardless of the government entity's size or receipt of Federal funding → UCSC!
- ▶ Requires that State and local governments give people with disabilities an equal opportunity to benefit from all of their programs, services, and activities
 - Public education
 - Employment
 - Transportation
 - Recreation
 - Health care
 - Social services
 - Courts
 - Voting
 - Town meetings



ADA Title II State and Local Gov't Activities

- ▶ Follow specific architectural standards in the new construction and alteration of their buildings.
 - They also must relocate programs or otherwise provide access in inaccessible older buildings, and communicate effectively with people who have hearing, vision, or speech disabilities
 - Public entities are not required to take actions that would result in undue financial and administrative burdens.
- ▶ Reasonable modifications to policies, practices, and procedures where necessary to avoid discrimination
 - Unless they can demonstrate that doing so would fundamentally alter the nature of the service, program, or activity being provided.



ADA Title II: Public Transportation

- ▶ Covers public transportation services, such as city buses and public rail transit (e.g. subways, commuter rails, Amtrak)
 - ▶ Public transportation authorities may not discriminate against people with disabilities in the provision of their services. They must:
 - Comply with requirements for accessibility in newly purchased vehicles
 - Make good faith efforts to purchase or lease accessible used buses
 - Remanufacture buses in an accessible manner
 - Unless it would result in an undue burden, provide paratransit* where they operate fixed-route bus or rail systems
- * A service where individuals who are unable to use the regular transit system independently are picked up and dropped off



ADA Title III: Public Accommodation

- ▶ Covers:
 - Businesses and nonprofit service providers that are public accommodations
 - ▶ Such as restaurants, retail stores, hotels, movie theaters, private schools, convention centers, doctors' offices, homeless shelters, transportation depots, zoos, funeral homes, day care centers, and recreation facilities including sports stadiums and fitness clubs.
 - Privately operated entities offering certain types of courses and examinations
 - Privately operated transportation, and commercial facilities.



ADA Title III: Public Accommodation

- ▶ Public accommodations must comply with:
 - Basic nondiscrimination requirements that prohibit exclusion, segregation, and unequal treatment
- ▶ Specific requirements related to
 - Architectural standards for new and altered buildings
 - Reasonable modifications to policies, practices, and procedures
 - Effective communication with people with hearing, vision, or speech disabilities
 - Other access requirements.
- ▶ Must remove barriers in existing buildings where it is easy to do so without much difficulty or expense, given the public accommodation's resources.



ADA Title III: Public Accommodation

- ▶ Courses and examinations related to professional, educational, or trade-related applications, licensing, certifications, or credentialing must be provided in a place and manner accessible to people with disabilities, or alternative accessible arrangements must be offered.
- ▶ Commercial facilities, such as factories and warehouses, must comply with the [ADA's architectural standards](#) for new construction and alterations.



ADA Title IV: Telecommunications Relay Services (TRS)

- ▶ Addresses telephone and television access for people with hearing and speech disabilities
- ▶ Requires telephone companies to establish interstate and intrastate TRS 24/7
 - TRS enables callers with hearing and speech disabilities who use telecommunications devices for the deaf (TDDs or TTYs), and callers who use voice telephones to communicate with each other through a third party communications assistant
 - The Federal Communications Commission (FCC) has set minimum standards for TRS services
- ▶ Also requires closed captioning of Federally funded public service announcements



Individuals with Disabilities Education Act (IDEA)

- ▶ Requires public schools to make available to all eligible children with disabilities a free appropriate public education in the least restrictive environment appropriate to their individual needs
- ▶ Before 1975, more than 1 million children with disabilities were excluded from American public schools
- ▶ Deaf and blind students in the US were traditionally educated in special *residential schools*
 - There have been growing objections to the segregated education provided in such schools
 - In recent years, the percentage of students educated in residential schools has declined substantially



IDEA (cont'd)

- ▶ An individual educational program (IEP) must be written for each student
- ▶ A student's IEP sets out the child's present educational performance, establishes annual and short term objectives, and describes the specially designed instruction and services that will enable the child to meet those objectives
 - A student's IEP must address the issue of least restrictive environment
 - In a situation where a child will not participate fully with peers without disabilities, the IEP must include an explanation of why and to what extent the child will not be included



IDEA (cont'd)

- ▶ IEP assessments and recommendations are made by a multidisciplinary assessment team
 - Including parents and possibly outside experts
- ▶ The assistive technology needs of a child with disabilities must be considered when formulating the child's IAP
 - Lack of local services or lack of funds are not sufficient reasons to deny services or devices recommended by the IEP
- ▶ Devices must be provided by the Local Education Agency



IDEA (cont'd)

▶ All school districts and county offices of education are required to form Special Education Local Plan Area (SELPA)

- "Special education" is defined as "*specifically designed instruction...to meet the needs of a child with disabilities with the necessary supplementary aids and related services*"
- SELPAs receive funds and are responsible for seeing that every eligible student receives appropriate services

▶ For infants and toddlers (birth through age 2):

- Individualized Family Services Plan (IFSP)
- Adaptive toys with easy-access switches, seating and positioning systems, computers and alternative access aids, communication software



Telecommunications Act

▶ Requires manufacturers of telecommunications equipment and providers of telecommunications services to ensure that such equipment and services are accessible to and usable by persons with disabilities, if readily achievable

- Covers telephones, cellphones, fax, pagers, answering machines, and televisions
- Accessible: must provide accessible input, control, and mechanical functions, as well as accessible output, display and control functions
- Usable: people with disabilities must be able to learn about and operate the product's or service's features effectively



Telecommunications Act (cont'd)

▶ Where access is not readily achievable, requires manufacturers and service providers to make their devices and services compatible with peripheral devices and specialized customer premises equipment that are commonly used by people with disabilities, if such compatibility is readily achievable

- Peripheral devices are devices that help make telecommunications products and services accessible to individuals with disabilities.
- Examples: TTY (text phone for the deaf, aka TDD), visual signaling devices, and amplifiers.



Telecommunications Act Closed Captioning

▶ *Open captions*: Visible by all viewers

- E.g.: burnt-in captioning

▶ *Closed captions (FCC)*: Visible only when requested

- Via a separate display or via a decoder
 - ▶ *Requires that apparatus designed to receive television pictures broadcast simultaneously with sound be equipped with built-in decoder circuitry designed to display closed-captioned television transmissions when such apparatus is manufactured in the United States or imported for use in the United States, and its television picture screen is 13 inches or greater in size.*

- Movie theater are exempted

▶ However, a landmark lawsuit in Washington, DC was settled with the movie theater chains involved agreeing to install rear window captioning in at least 12 metro DC area theaters



Telecommunications Act Identifying Access Needs

▶ Companies should engage in a number of activities to identify barriers to accessibility and usability

- Where the company conducts market research, product design, testing, pilot demonstrations, and product trials, it should include individuals with disabilities in target groups for such activities
- Companies should work cooperatively with disability-related organizations
- Companies should undertake reasonable efforts to test access solutions with people with disabilities



Fair Housing Act

▶ Prohibits housing discrimination on the basis of race, color, religion, sex, disability, familial status, and national origin

- Covers private housing, housing that receives Federal financial assistance, and State and local government housing

▶ Requires owners of housing facilities to make reasonable exceptions in their policies and operations to afford people with disabilities equal housing opportunities

- E.g., a landlord with a "no pets" policy may be required to grant an exception to this rule and allow an individual who is blind to keep a guide dog in the residence



Fair Housing Act (cont'd)

- ▶ Requires landlords to allow tenants with disabilities to make reasonable access-related modifications to their private living space, as well as to common use spaces
 - The landlord is not required to pay for the changes
- ▶ Requires new multifamily housing with four or more units to be designed and built to allow access for persons with disabilities
 - Including accessible common use areas, doors that are wide enough for wheelchairs, kitchens and bathrooms that allow a person using a wheelchair to maneuver



Air Carrier Access Act

- ▶ Prohibits discrimination in air transportation by domestic and foreign air carriers against qualified individuals with physical or mental impairments
 - Applies only to air carriers that provide regularly scheduled services for hire to the public.
- ▶ Requirements address a wide range of issues including boarding assistance and certain accessibility features in newly built aircraft and new or altered airport facilities



Assistive Technology Act (Tech Act)

- ▶ Defines an AT device as:
 - *"Any item, piece of equipment, or product system (whether acquired commercially off the shelf, modified, or customized) that is used to **increase, maintain, or improve functional capabilities** of individuals with disabilities"*
- ▶ Defines an AT service as:
 - *"Any service that directly assists an individual with a disability in the selection, acquisition, or use of an assistive device"*



Assistive Technology Act (Tech Act)

- ▶ The Tech Act facilitates the development, evaluation, application and delivery of assistive technology devices and services.
 - Supports **states** in sustaining and strengthening their capacity to address the AT needs of people with disabilities
 - Supports the **investment** in technology across federal agencies and departments that could benefit individuals with disabilities
 - Supports **microloan** programs to individuals wishing to purchase AT devices or services



Medicare

- ▶ A federally managed medical insurance plan, regardless of income, for consumers age 65 and older, and for persons under 65 who are eligible for SSI (Supplemental Security Income)
- ▶ Medical expenditures fall into:
 - Hospital insurance (Part A)
 - Supplementary medical insurance (Part B)
 - ▶ Covers for physician services, outpatient care, some short term rehab services, therapies, etc.
 - ▶ Prosthetic and orthotic devices can also be covered (include artificial legs and arms)
 - ▶ Also devices such as electronic speech aids may be covered as prosthetic devices



Medicaid

- ▶ Medicaid is the federally funded program that provides health insurance to persons who meet the applicable definitions of low income
- ▶ People with chronic illness or disabilities who qualify for SSI are automatically eligible for Medicaid in 39 states
- ▶ An individual is eligible for SSI if he/she is:
 - Aged 65 or older, or
 - Blind, or
 - Disabled
- ▶ And
 - Has limited income and resources



Medicaid

- ▶ The program may provide services as medical supplies, durable medical equipment, and orthotic (braces) and prosthetic devices
 - Devices typically purchased through Medicaid include canes, crutches, walkers, manual wheelchairs, manual hospital beds.
 - Hearing aids and glasses are covered up until the age of 21
- ▶ Another program is the In-Home Supportive Service
 - Considered an alternative to out-of-home care
 - Eligibility: same as SSI



Independent Living Centers

- ▶ Freedom to make choices and the ability to live in the community is a basic civil right that should be extended to all people, regardless of disability
 - Liberate people with disabilities from institutional living
 - Freedom to make choices, including mistakes, empowers people to further their involvement in their life and community
- ▶ Rather than “being taken care of”, persons with disabilities are empowered to make their own choices and to manage their own lives
 - In the past, agencies “would take care of their needs”, without control from the individual with a disability
- ▶ 1st ILC: Berkeley, 1971: <http://www.cilberkeley.org/>
 - Now 28 in CA, many more in US
- ▶ By charter, at least 51% of the staff and 51% of board of directors must be individuals with disabilities



ILCs (cont'd)

- ▶ ILCs do not operate any type of residential facilities!
- ▶ ILCs do provide:
 - Peer counseling
 - Information and referral
 - Independent living skills training
 - Individual advocacy
 - Systems advocacy for the community.
- ▶ Individual centers may provide more services, including:
 - Children and youth services,
 - Community mobility training including using public transit
 - Personal assistance service
 - Assistive Technology outreach coordination
 - Transportation services
 - Vocational services

