Slide 1 - Introduction to Accessibility

Welcome to the Introduction to Accessibility lecture. We'll discuss what accessibility is, the different types of disabilities, and why removing accessibility barriers is so important.

Slide 2 - What is accessibility?

If you Google 'what is accessibility', you'll find thousands of pages with definitions.

I really like the one from the Interaction Design Foundation: Accessibility is a concept of whether a product or service can be used by everyone, however they encounter it.

Notice this definition states product or service. This isn't just about websites or even digital content. That's the main focus of the course, but realize there is so much more to accessibility than interacting with technology.

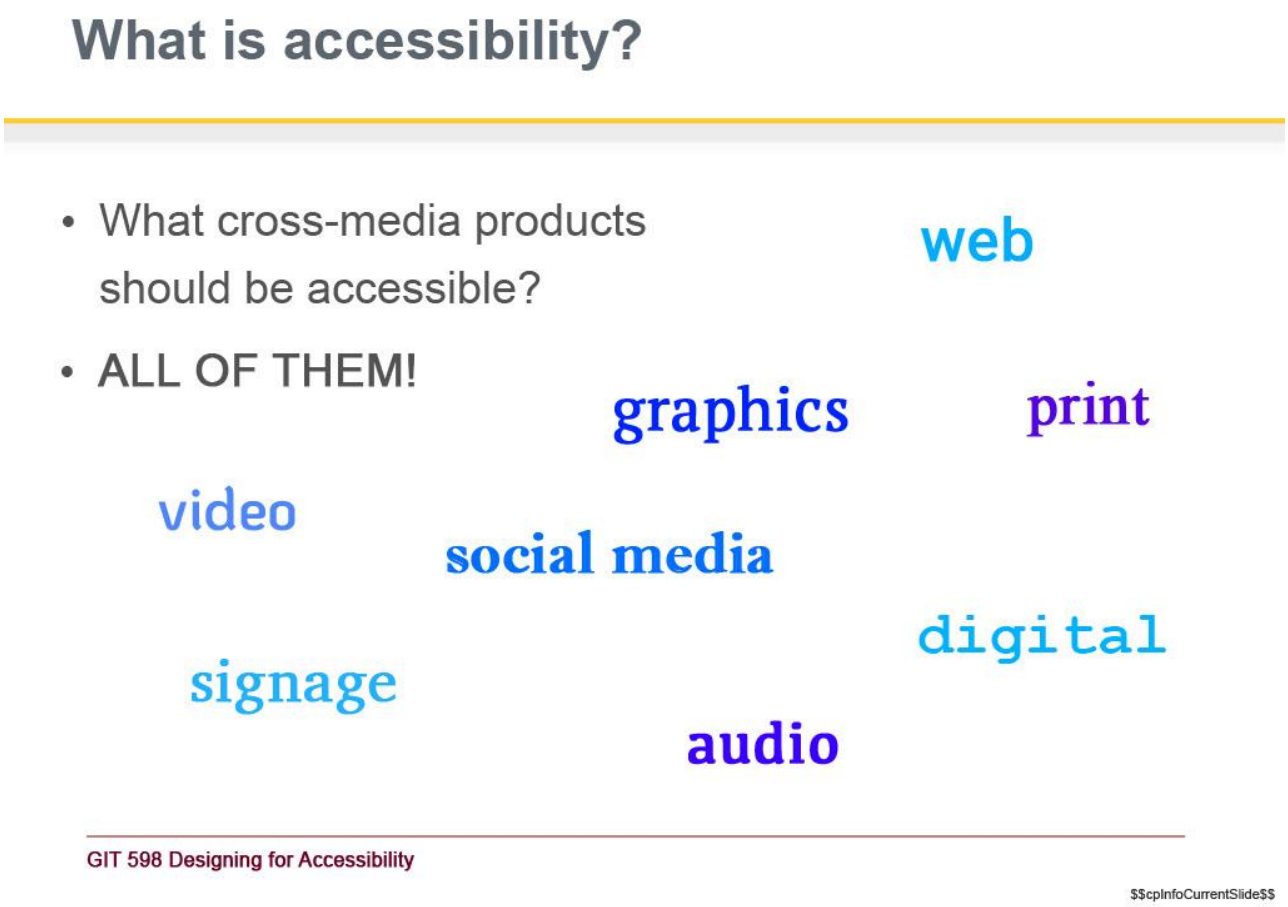
According to the World Health Organization, 1.3 billion people, that's one in six people, across the globe experience a significant disability.

In July 2024, the Centers of Disease Control released statistics for the United States: One in four people have a disability.

Realize that seventy percent of disabilities are invisible. Just because there is no physical display of a disability doesn't mean a person doesn't have a disability.

The next several slides cover the main five types of disabilities, most of which are not physically visible.

Slide 3 - What is accessibility?



This course is based on cross media and isn't directed to just websites, as I mentioned before. It's any number of products or services that live within the cross-media realm, including digital, print, social media, audio, video, graphics, signage... anything we produce to communicate a specific message or story.

Design is a form of communication and also a form of storytelling.

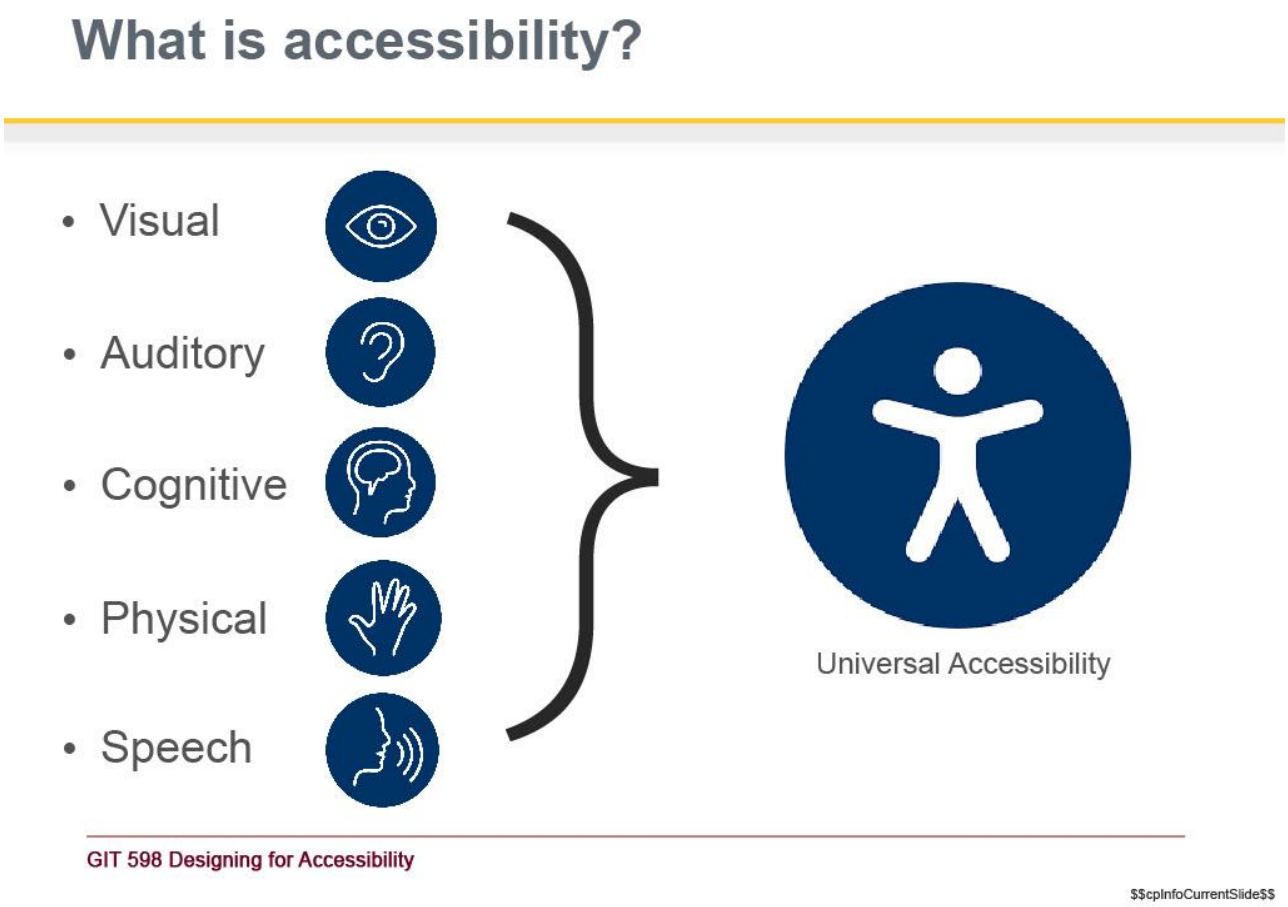
The types of disabilities vary from person to person, and almost everyone will experience some kind of disability in their lifetime.

So let's look at the different types along with their associated icons: visual, auditory, cognitive, physical, and speech.

Addressing these five in the design process means we can achieve universal accessibility, which is the icon of a dark blue circle with a white stick figure with outstretched arms, which is on the right side of the slide.

Universal accessibility is the goal.

Slide 4 – Types of disabilities



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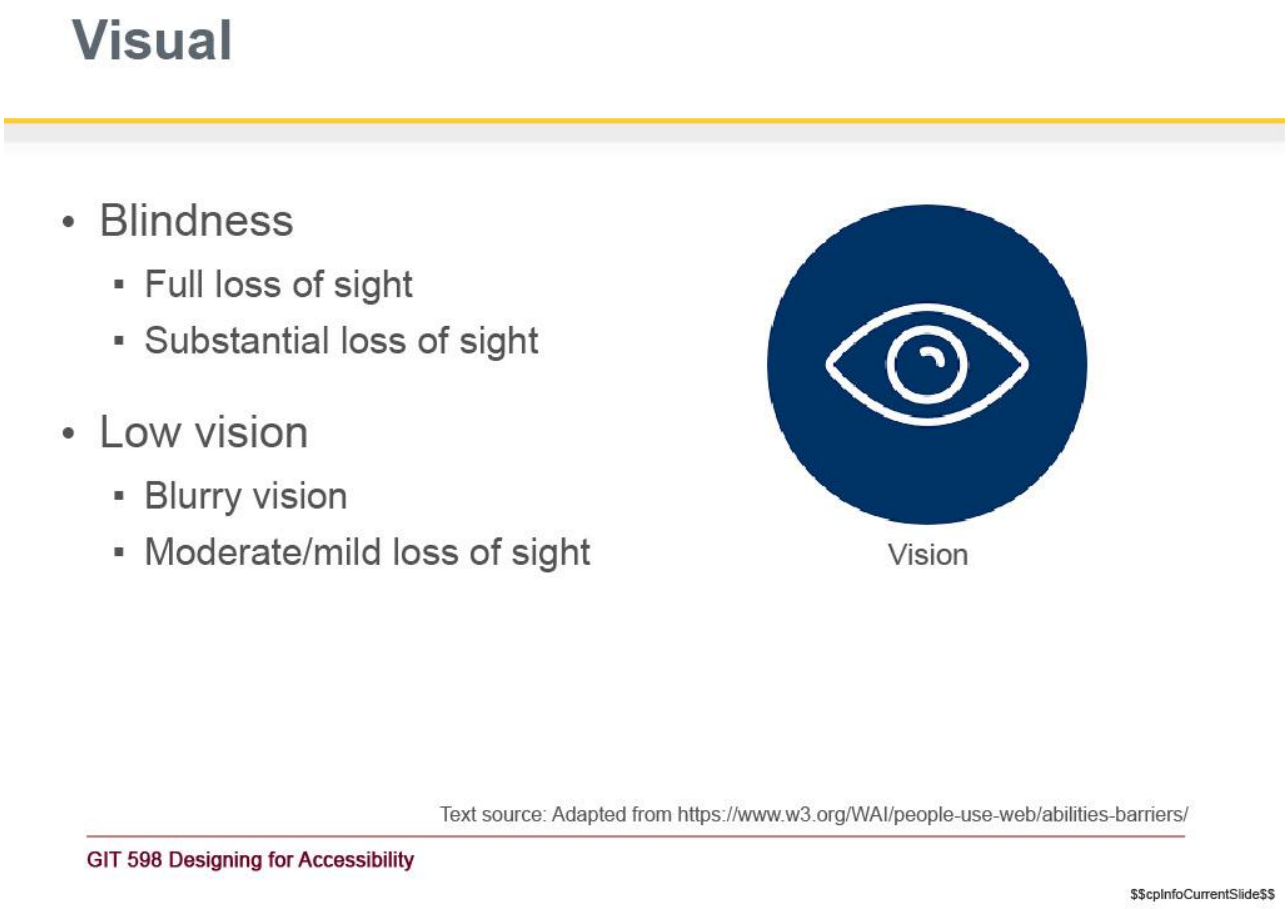
Slide 5 - Visual



The icon on the right side of the screen is a dark blue circle with a white outline of an eye signifying visual disabilities.

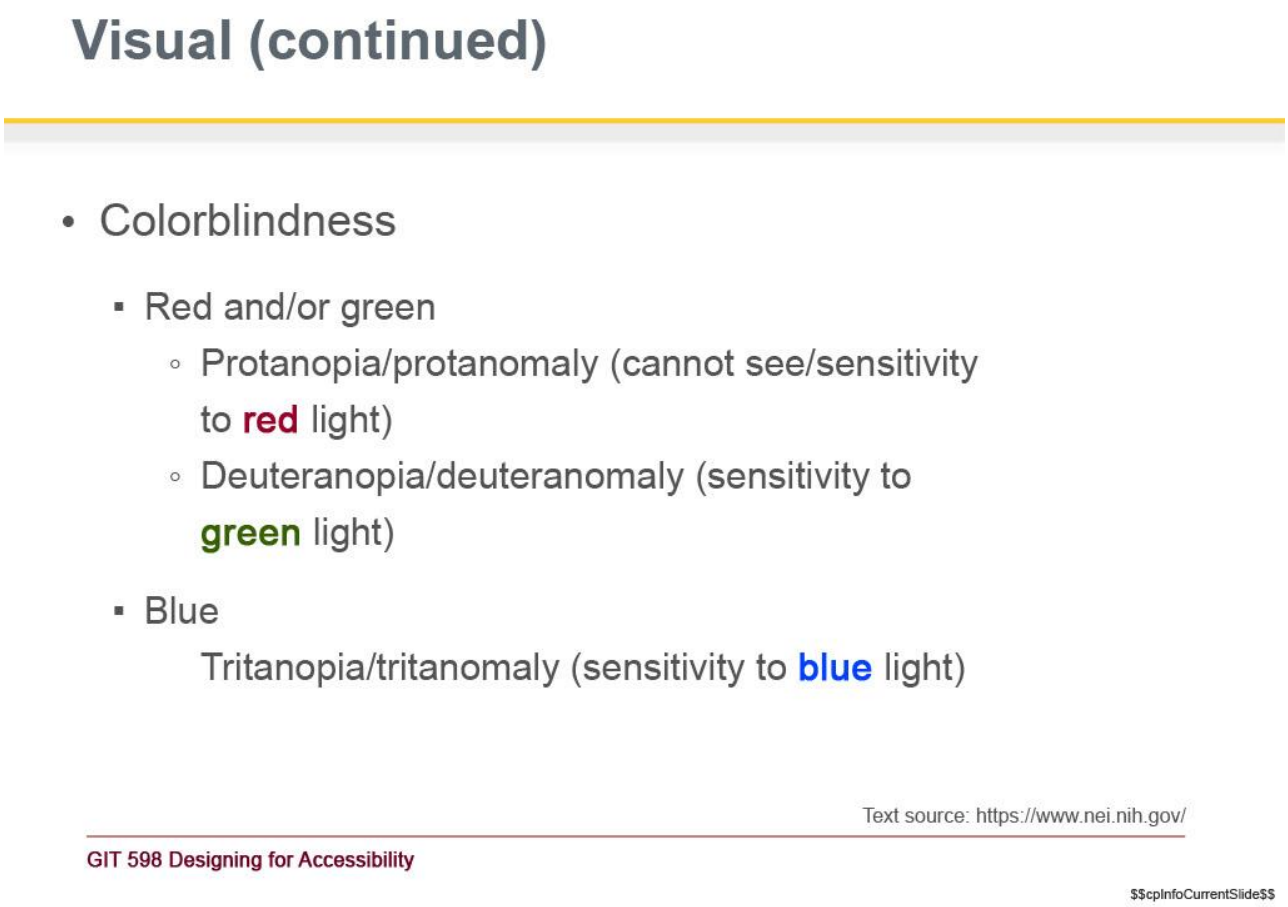
On the left side of the slide are the different types of disabilities associated with vision. Blindness means a full or substantial loss of sight.

I talked about disabilities that are not physically displayed. Low vision is one of those, which includes people with mild or moderate loss of sight or, have blurry vision.

This does not include those who wear glasses or contacts. It includes those with conditions that cannot be corrected, such as macular degeneration or glaucoma. Low vision usually is an invisible disability.

An example of good accessible design for visually impaired users is textbooks and PDFs that are available in large print or Braille format.

Slide 6 - Visual (continued)



Color blindness is another invisible disability. There is no physical display if you have color blindness.

The types are red and/or green, and then blue.

Protanopia means an inability to see red light, and protanomaly means having a sensitivity to red light.

Deuteranopia means not being able to see green, and deuteranomaly is a lower sensitivity to green light.

Protanopia is the most common.

Now, tritanopia and tritanomaly means not being able to see or having a lower sensitivity to blues.

An example of good accessible design for colorblind users is an application design system that does not rely on color for showing emphasis of importance, such as me bolding the words red, green, and blue because if they were just the colors red, green, and blue, those who are colorblind would just see gray.

We'll discuss more about the types of colorblindness in a future lecture.

Slide 7 - Auditory

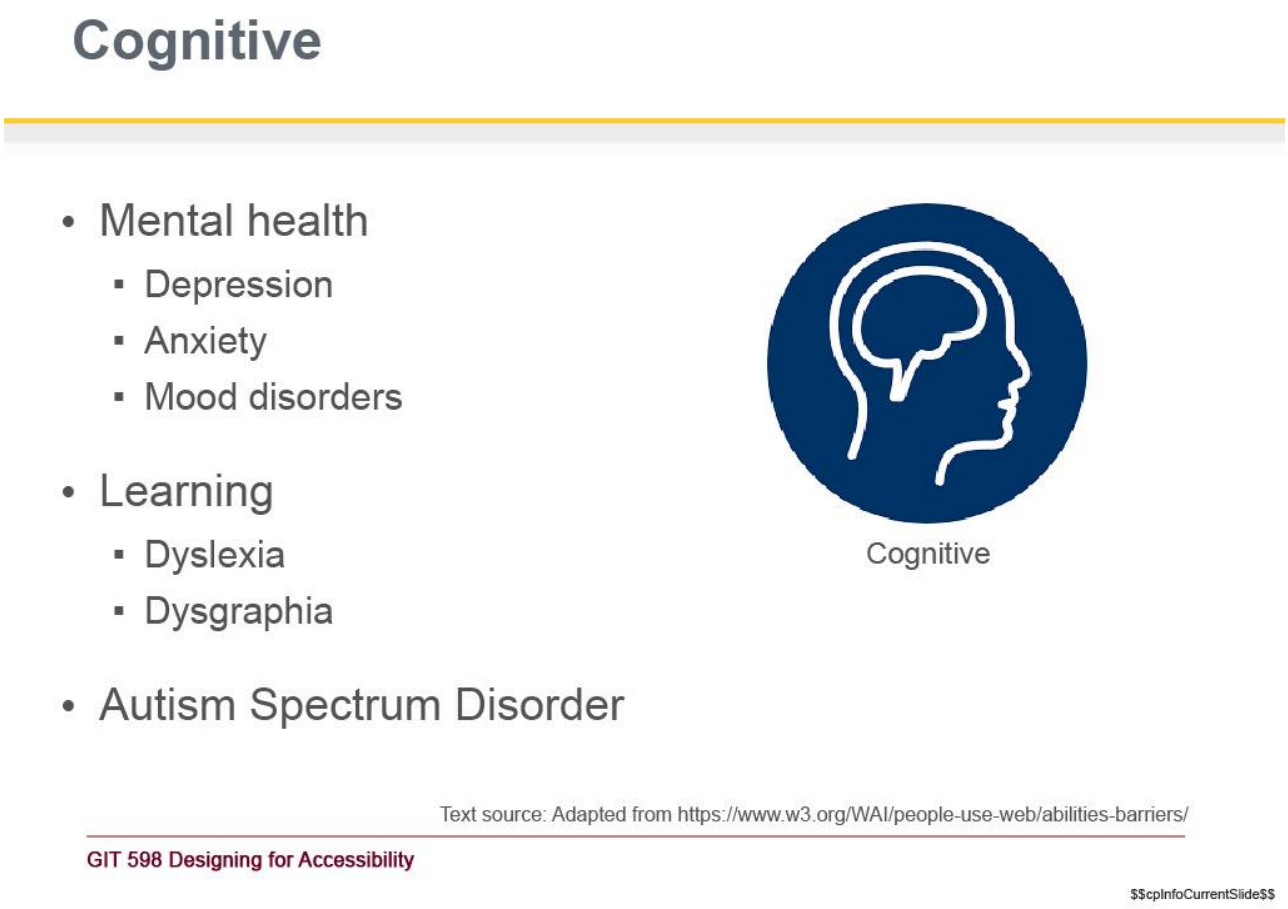
On the right side of the slide is a dark blue circle with an outline of an ear representing disabilities associated with hearing or auditory. Auditory disabilities include deafness and hard of hearing and also deaf-blindness.

Deaf-blindness affects hearing and vision.

Examples of good accessible design for users with hearing impairments is instructional videos that are captioned and include sign language interpretation.

For people with deaf-blindness, publishers who print Braille editions of books allow for even more accessibility.

Slide 8 - Cognitive

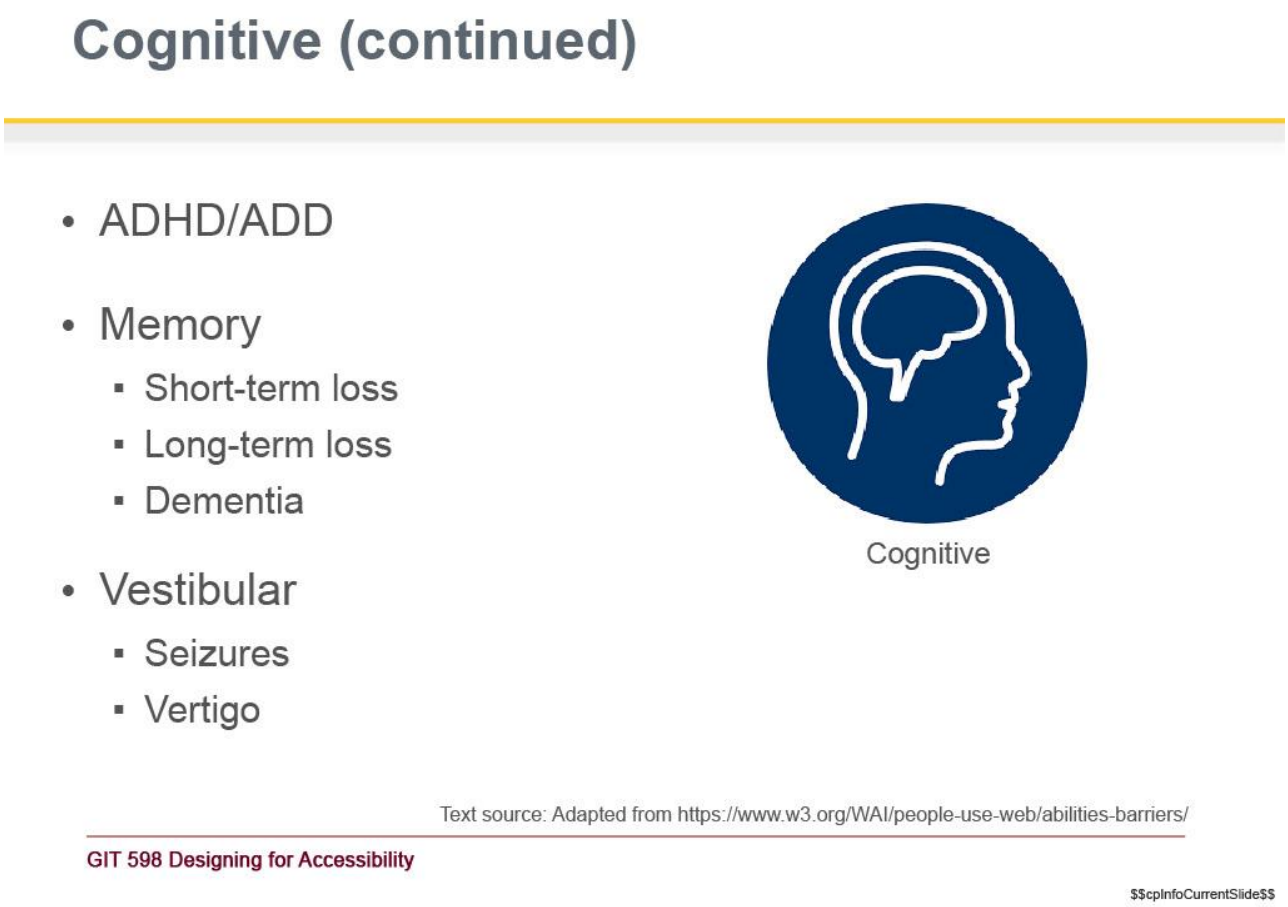


The dark blue circle icon for cognitive disabilities on the right side of the slide shows a white outline of a side view of a head and inside the head is a white outline of the human brain.

Realize that most of the cognitive disabilities listed have no physical display, including mental health issues like depression, anxiety, or mood orders, learning conditions such as dyslexia and dysgraphia, and autism spectrum disorder.

Some examples of good design would include social media posts that are optimized for people with cognitive disabilities by using clear, simple language and with minimal visual distractions.

Slide 9 - Cognitive (continued)

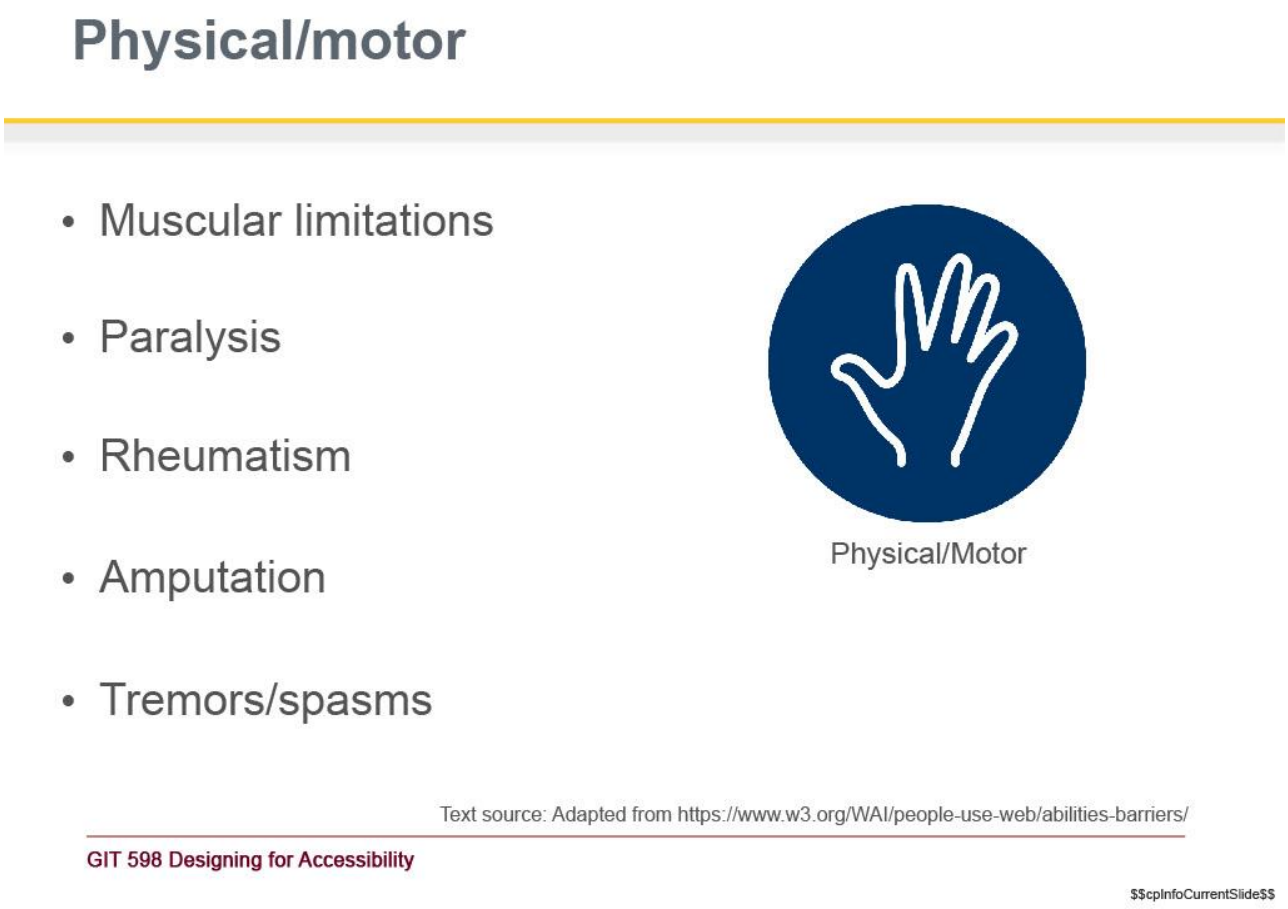


The same cognitive icon is on the screen on the right, along with a continuation of the list: ADHD and ADD; memory loss, such as short term, long term, or dementia; and vestibular disorders, such as seizures and vertigo.

There are many more, including people with a brain injury, post traumatic stress disorder, or multiple sclerosis.

An accessible example for those who have vestibular impairments is a video that contains no flashing or strobe effects, which could trigger seizures or vertigo.

Slide 10 - Physical/Motor

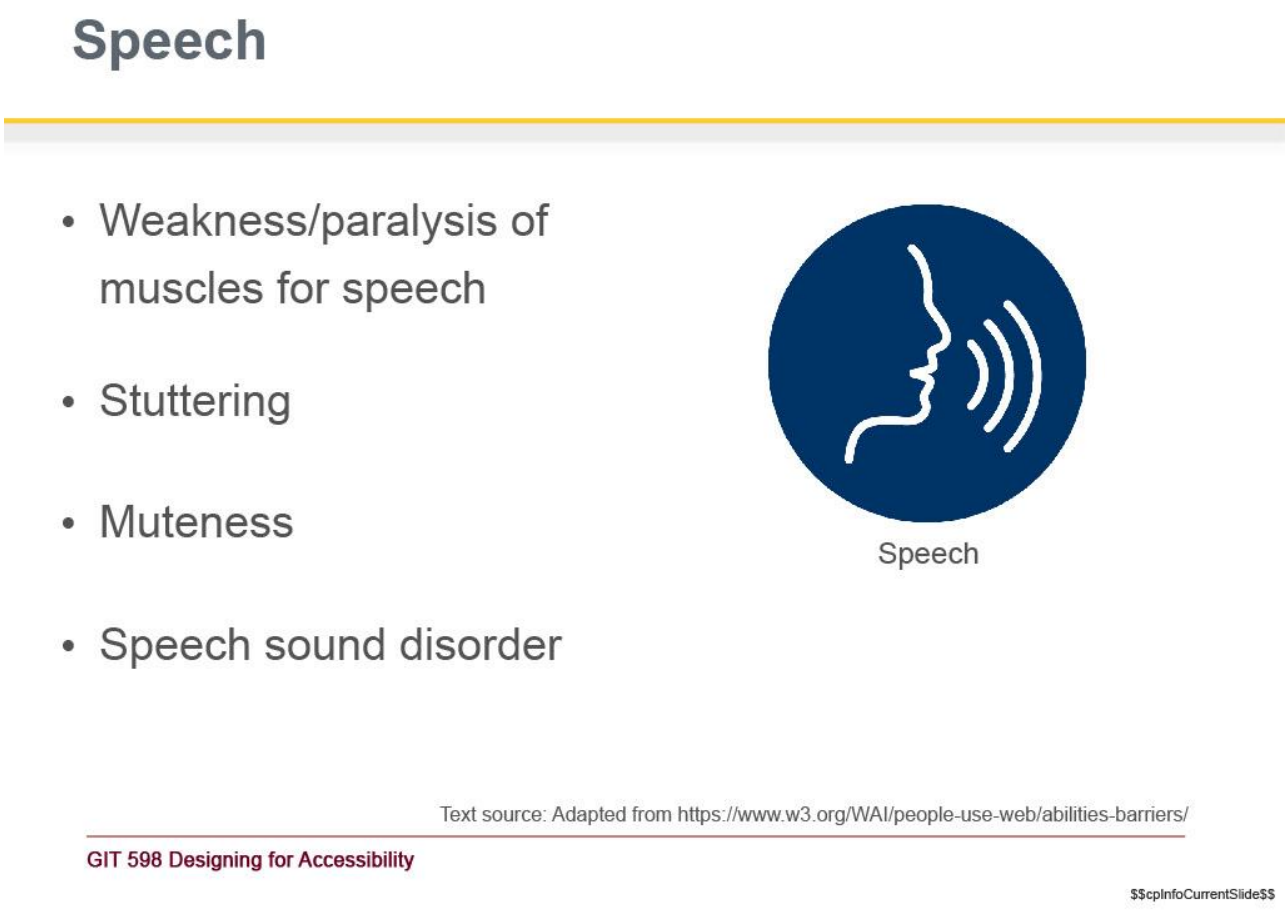


On the right side of the slide is the dark blue circle icon for physical and motor disabilities, which depicts a white outline of a hand. Physical and motor disabilities include muscle limitations, paralysis, rheumatism, such as rheumatoid arthritis, amputation, and tremors or spasms.

A reduction of physical or motor skills affects the ability to work with a mouse and sometimes a keyboard.

An example of good accessibility, a website with keyboard navigation and voice command for motor-impaired users.

Slide 11 - Speech



On the right side of the slide is a dark blue circle with a white outline of the side of a face. The mouth is open and three curved lines are coming out depicting speech. Speech disabilities include a weakness of paralysis of the muscles used for speech, stuttering, muteness, and speech sound disorders.

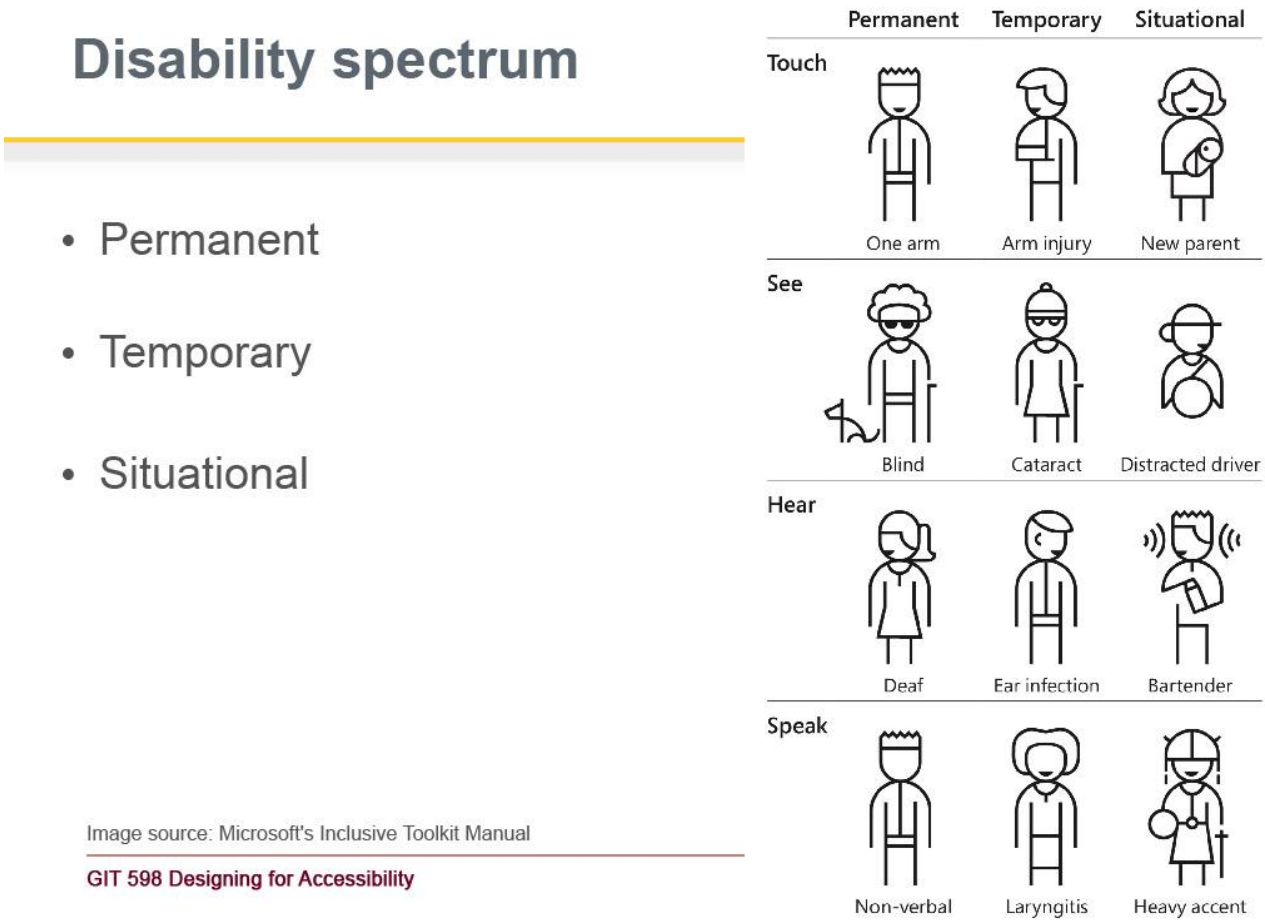
We won't be covering much on speech in this course as products like text telephone devices or TTYs, voice input or telephone systems that rely on your voice input only, not numbers.

These are not as prevalent in cross-media design, but I want you to be aware of this because it can affect websites if you require voice input only.

An example of good speech accessibility is a video game with different communication methods, such as text-based chat for users with speech impairments.

Realize that people can have multiple disabilities, such as a person who is deafblind, or a person who has short term memory loss and motor skill limitations.

Slide 12 - Disability spectrum



Think of disability as a spectrum. There are permanent, temporary, and situational disabilities.

That doesn't mean one is more important than another. It just means a person can be somewhere within the spectrum from permanent to situational.

On the right side of the slide is a great line drawing example from Microsoft's Inclusive Toolkit manual. It shows a spectrum for touch, see, hear, and speak.

For example, for touch, a permanent disability could be someone who only has one arm. Temporary can be someone who broke their arm and has limited use. Situational could be a new parent who is holding their child. If something requires two hands, such as typing, this will be challenging for all of these people.

For seeing, the spectrum is from someone who is blind to someone who has cataracts (Hi, that's me!) to someone who is driving distracted.

Hearing includes a spectrum from someone who is deaf, to someone with an ear infection whose hearing is diminished, to someone who is in a loud environment, such as a bartender who struggles to hear over the din of the crowd.

The speaking spectrum is someone who is nonverbal, to someone who lost their voice temporarily such as getting laryngitis, to someone with a heavy accent.

I'm willing to guess each of you has been or will be somewhere on these spectrums at least once in your life, probably more, and that you know at least one person on one or more of these spectrums.

Slide 13 - Accessible design vs. inclusive design

You will hear or read the phrases accessible design and inclusive design.

They may seem like the same, but they aren't. They are, however, intertwined.

I watched a recent video about inclusive design by Therese Fessenden, a senior UX designer at the Nielsen Norman Group. Something she said really resonated with me, and, hopefully, it will with you as well.

Accessible design is a destination; inclusive design is how we get to that destination.

Accessible design is removing barriers for people with disabilities.

Accessible design is part of inclusive design, but inclusive design is a much broader concept.

It means using design methodologies to remove barriers for all people and building products for the full range of human diversity.

And Kat Holmes talks about this throughout her book, learning about human diversity and using that within your design process.

Slide 14 - Impact of designing for accessibility

Impact of designing for accessibility

- Accessibility for one = accessibility for all
- Curb cuts/ramps

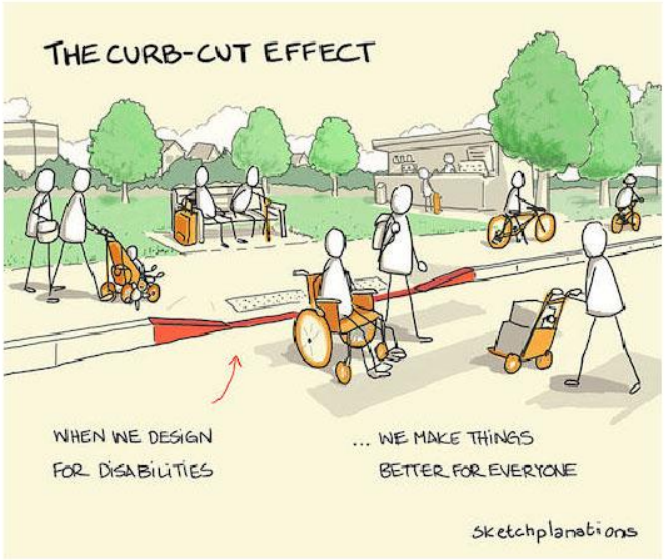


Image source: https://sketchplanations.com/the-curb-cut-effect

GIT 598 Designing for Accessibility

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I mentioned in the course introduction video that accessibility for one equals accessibility for all. One example of this is curb cuts.

In the 1960s and early 70s, students and activists for change for people with physical disabilities pushed the city of Berkeley, California, and the university there to cut curbs and install ramps at street crossings so those using wheelchairs could easily move between the street and the sidewalks.

What was discovered is that not only did those curb cuts help people with disabilities, but it also helped others, including parents pushing children in a stroller, elderly individuals, and even people who are pulling luggage or rolling suitcase.

It’s now called the curb cut effect.

This and other work done by activists helped bring about the Americans with Disabilities Act in 1990.

Since the 1970s, the curb cut effect spans more than just curves. The effect has become the standard that keeps being true: When a barrier is removed, the solution benefits others and sometimes everyone.

In the cartoon on the right side of the slide shows that there’s a curb cut. It’s in red and on a sidewalk.

And a person in a wheelchair easily can get from the sidewalk to the street. But then there’s also a couple with a stroller, people on bicycles, someone who is pushing a dolly with heavy boxes. This is a good visual display of what the curb cut effect can do.

Slide 15 - Disability rights milestones

On the right side of the slide is a circle graphic meant to represent disability rights. These illustrations by BSD Studio are abstract representations of the topics and meant to be decorative in nature. As mentioned in a future lecture, images are decorative if they are used for ambience, or ‘eye candy,’ if you will. Whether or not they are there, you as a user still get the information needed from the text. Therefore, these images do not have explanations or text attached. You’ll see more of these in future lectures.

I briefly want to cover the major milestones in disability rights.

We’ll discuss these and others in-depth in the next module.

In 1973 in the United States, the Rehabilitation Act of 1973 was passed by Congress. This was the first of many pieces of legislation to address equality for those with disabilities.

Section 504 of this act made it illegal to discriminate against anyone with a disability. This focus mostly on equality in employment and access to public services.

It took nearly twenty years for the next milestone, the Americans with Disabilities Act, or ADA, to provide more equality, especially in the form of physical places, transportation, and other public accommodations.

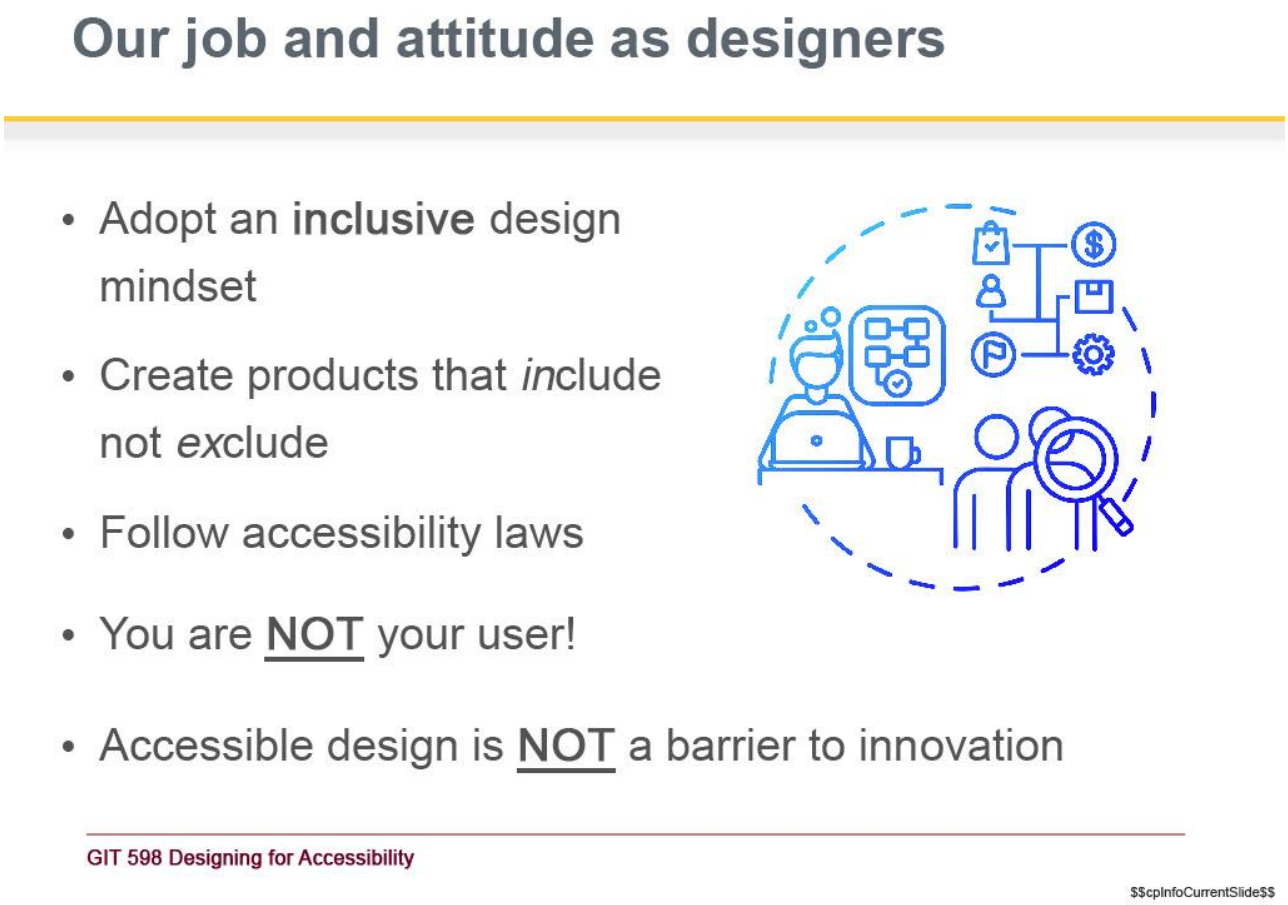
Eight years later, we finally get that equality for digital spaces with section 508 of the Rehabilitation Act.

Section 508 focuses on technology used within the federal government that disseminates information to the public.

And less than a year ago, title two was added. This extended the requirements to public entities, including state and local governments, and that includes universities, health care, and other public services.

Basically, if you offer products or services through a website or other digital, means, this law is for you.

Slide 16 - Our job and attitude as designers



While this class is focusing on designing cross-media products with accessibility in mind, my main goal for the course is for you to come away with not just tools in your accessibility design toolkit but for you to adopt and nurture an inclusive design mindset.

That means creating products that include rather than exclude the audience as a whole.
We as designers need to follow the laws and regulations in effect to ensure accessible design, not just because it's, quote, unquote, it's the law, but because it's the right thing to do.

And remember, you are not your user. You are not your audience. Can I make this point any clearer?

For example, even if you are a Spotify user, you cannot assume other Spotify users think like you. You have much more knowledge than a consumer who has no background in design, user experience, or accessibility.

It's been said that accessibility design is a barrier to innovation. "We can't do this because of accessibility. We can't do that because of accessibility."

Instead of thinking of it as a barrier, think of it as an opportunity. Designing for accessibility means you're giving access to more people with disabilities, yes, but it also means you're providing a better experience for everyone.

And if that's not a definition of innovation, I don't know what is.

Slide 17 – Watch additional lectures in module

Thanks for watching the introduction to accessibility lecture. There are additional lectures in this module, so please be sure to view those.