

Accessibility

OREGON COAST COMMUNITY COLLEGE RESOURCES



[Disability Services](#)



[Accessible Computer Services](#)



[Accessibility for Online Classes](#)



[Creating Accessible Documents](#)



[Human Resources: Americans with Disabilities Act](#)

Accessibility

ONLINE ACCESSIBILITY GUIDES

[Microsoft Office](#)

[Google Docs](#)

[PDF](#)

[Web Access](#)

[Adobe Acrobat
Reader](#)

[Student
Services](#)

[Accessible
Cheat Sheets](#)

[Microsoft
Blackboard](#)

[Visual
Impairment](#)

ALLY

[Canvas](#)

[Windows](#)

[Chrome
Extensions](#)

[Gmail](#)

[Apple/Mac
Accessibility](#)

Accessibility

MICROSOFT OFFICE ACCESSIBILITY

This will be a page to link in the above under “Microsoft Office”



[Word: Make your documents accessible](#)

[Excel: Make your spreadsheets accessible](#)

[PowerPoint: Make your presentations accessible](#)

[Outlook: Make your emails accessible](#)

[Access: Make your databases accessible](#)

GOOGLE DOC ACCESSIBILITY

All of this should go under the link for Google Doc

<https://www.google.com/accessibility/products-features/>



Google Drive is great for sharing documents and media, but Google Docs is missing a few key accessibility functionalities. If you need to convey a lot of data in a table, have complex tables, or complex equations, then Microsoft Word will be a better choice. Collaborating and co-editing a Google Doc can also be challenging for users of assistive technologies. For a very short guide on how to make your Google Docs accessible go to: [Make your document or presentation accessible.](#)

Additional Resources

- [Get started in Google Docs with a screen reader](#)
- [Use a Braille display with Google Docs](#)
- [Google Docs accessibility for iPhone and iPad](#)
- [General Google Drive help](#)
- [Using Google Hangouts](#)

Accessibility Checker for Google Docs

Grackle Docs is an accessibility checker for Google Docs. It's an Add-On for the Chrome browser. [Download the Add-on](#) and then in any Google Doc, go to the Add-Ons menu and select Grackle Docs and then select Launch.

WINDOWS ACCESSIBILITY

Link this to the above button for Windows

<https://support.microsoft.com/en-us/hub/4339839/windows-accessibility-help>

Resize desktop icons, enlarge text, or use Narrator; Microsoft offers a lot of hints and tips to access your assignments and webpages.

PDF DOCUMENT ACCESSIBILITY

Add this to the PDF button

There are several ways to create an accessible PDF

- Convert a Source File (such as PowerPoint or Word) document to a PDF
- Scanning a hard copy of a document to a PDF
- Creating the document in Adobe Acrobat Pro

[How to save an accessible PDF in Office](#) (Windows Only)

ACCESSIBILITY CHECKERS FOR ADOBE ACROBAT

Add this to the adobe button

[Adobe Acrobat Pro](#)

[Acrobat Reader](#)

*NOTE: In Adobe Reader, you can use the **Read Out Loud** feature to see how readers who use text to speech conversion tool experience it.*

CANVAS ACCESSIBILITY

Add this to Canvas, also to Ally see Darci for more information

OCCC uses Blackboard Ally to provide support for students of all abilities and learning styles and to increase faculty awareness of online content accessibility in the following ways: First, Ally generates alternative formats for students to download. This means students can choose formats that work best for them, such as HTML for improved reading on mobile phones, Electronic Braille for visually impaired students, and Audio for learning on the go. Second, Ally automatically scans original content and checks against Web Accessibility Guidelines (WCAG) 2.0 to rate content and provide instructors with accessibility scores. And third, Ally provides feedback to instructors on how to improve their accessibility scores. This guidance helps instructors fix current content, but also gives them the tools to create more accessible content in the future. Ally helps create a more inclusive online learning environment by making course content more accessible for all learners.

Talk to Darci Adolf in the Library.

INSTRUCTIONAL SUPPORT FOR ACCESSIBILITY



Download a copy of these handbooks from Portland Community College and feel free to share! They are editable with Adobe Illustrator and licensed under CC BY-NC-SA 4.0. The links are listed below:

[Web Accessibility Handbook \[pdf\]](#)

[Complex Images for All Learners \[pdf\]](#)

[Accessibility Quick Guide](#)

Headings:

Headings in a document or web page make a page look well-organized, give an at-a-glance view of the topics covered, help people navigate to various sections easily, and can auto-generate a table of contents for you. If you create your headings by enlarging the font, changing the font style and color, the text is still tagged in the app as “Normal” text. This is a “faux” heading. It looks like a heading but doesn’t act like a heading.

Using the one-click formatting options for Headings from your app’s toolbar, tags the text as a Heading. (You read correctly. One-click!) This allows assistive technologies to read only the Headings on a page, allowing users to also benefit from that “at-a-glance” view of the topics and the ability to quickly navigate to the section they need. Otherwise, they would need to read the document in full until they get to the needed section. And don’t forget, if the Heading isn’t tagged correctly, Word and Google Docs can’t auto-generate that Table of Contents for you!

Lists:

When making a list, use the built-in list tool instead of typing 1 enter, 2 enter, 3 enter, etc. Doing this will format your list with the bullets of your choice, indents, and spacing. When formatted using the list tool, the list is tagged correctly, and assistive technology will notify a user that there is a list with “x” number of items and let the user know what list item they are on.

Unlike headings where users can navigate through a document by having the headings read out to them, you can’t navigate a list using assistive technology. So, if you organize documents in outline form, consider converting your top-level items to headings instead. This way your reader can quickly jump to the section they need.

Meaningful Links:

If you link to a website, article, or document, then instead of simply copy/pasting the URL, insert the link using an “insert link” tool and give the link a title, preferably the name of the website, article, or document. Having a long web address in the middle of your content is not the most pleasant sight. Giving your link a title, not only makes your document look more professional and organized, but it allows users of assistive technology to search a page for certain links more effectively.

Imagine if you were searching a page for a link and all you heard was “Link: https:// and a bunch of numbers” or “Link: this article” or “Link: Click Here.” You never know where that link was taking you unless you read through the entire document or page again.

Alternative Text:

Images need some sort of alternative text for individuals who have visual impairments, including color-blindness. Adding alternative text to an image is easy to do and likely less time consuming than removing the images and reformatting your document. Alt-text should be limited to about 100 characters, so you don’t need to write a novel. Different images will require different approaches. For example:

- If the image is purely decorative and adds no value to the content, then simply write “decorative.” Some applications give you the option to check a box if the image is decorative.
- If the image provides a visual illustration of a process, diagram, or model that supplements the existing text explanation, then something as simple as “illustration of the [process]” or “screenshot of adding alt-text to an image” may be all that is necessary!
- If the image is of a table, convert it to an actual table. If you use it, you will need to write out all that information in a long description.

Color:

Approximately [8% of men](#) worldwide have some sort of color-blindness. The number increases to about [10-11%](#) in areas with predominately Caucasian populations. The most prevalent type of colorblindness affects the red-green spectrum. In the image below, you can get a visual indication as to what is it is like for someone with red or green colorblindness to view color. Those with colorblindness may see these colors in a grayed-out version of varying hues that might be very difficult to distinguish.



Because of this, it is important to not use color alone to convey information. For example, if you need to create a bar chart using different colors, have the bar also be textured too. This way if someone can't distinguish the color, they can distinguish it by texture. If a line chart, have dashed and dotted lines to accompany the color. If you use colored text for emphasis, bold or italicize it too. Color is okay if it is used in the right way.

Color contrast between background colors and text colors (or even an image or clipart) needs to be sufficient as well. In the image below, it could be difficult for someone who can't see green very well or who has low vision to make out the clip art image clearly.



Tables:

Tables need to have column headers and/or row headers. Table Headers are different from the Headings you use for section titles. So, you can't simply reformat the text as a heading, you will need to tag the cell as a header. In many apps, checking the header box or marking the cell as a header will do all the formatting for you, saving you a lot of time. Using column/row headers also allows those using assistive technology to know where they are at in the table.

Without these headers, the table is read from left to right, top to bottom. There is generally no identification to which column you might be in. (Think of a linear list of data). When headers are used, the user is notified what row they are in, what column, the name of the column, and

then the information that is in that cell. The formatting that might be taken in visually gets read out properly to those with visual impairments.

Closed captioning is essential for those who are deaf and hard of hearing, but they also help non-native English speakers, those who are unfamiliar with vocabulary, viewers with some learning disabilities, or those in a noisy environment. Audio transcripts also benefit many students. While they are essential for those who are deaf or hard of hearing, they also assist anyone who would like to read or search the transcript.

Another form of captioning is called audio description. This is when auditory descriptions are added to media when important visual elements are not fully verbalized. It is best if creators of media are aware of the visual elements that will need to be described and develop the media with that in mind. For instance, imagine if you decided to listen to a webinar to make the most of your rush hour commute. Wouldn't it be nice if the speaker took a little extra time to describe what they are talking about instead of saying "and this diagram here," "and over here, you can see," or "in this equation, start by..."?

Equations:

Math and science notation are not accessible to screen reader users unless it is written in MathML or MathType (in MS Word). Some things to consider when creating math/science content:

- Images of equations should be converted to MathML or MathType as well.
- When making video, remember to read out all the equations and notation instead of saying "this equation here."
- If you have handwritten answer keys, they will also need to be converted to a format that can be read by a screen reader when an accommodation arises.

UNIVERSAL DESIGN

WHAT IS IT?

The Disability Act 2005 defines Universal Design, or UD, as:

Universal Design is the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.

Thus, Universal Design is about making things (objects, spaces, events, activities, etc.) more usable to more people. It is about recognizing that decisions we make when planning and offering educational opportunities will have an impact on who can benefit from those opportunities. Universal Design is about recognizing that there are often barriers built into programs, courses, and assignments, and that sometimes students with disabilities will use the formal accommodation process to get around the barriers, but that other times students are hitting those barriers without support. Universal Design is about identifying and reducing barriers at the design stage. This levels the playing field for students and offers more opportunities for engaging with the subjects being taught.

THE SEVEN PRINCIPLES OF UNIVERSAL DESIGN

The 7 Principles of Universal Design were developed in 1997 by a working group of architects, product designers, engineers and environmental design researchers, led by the late Ronald Mace in the North Carolina State University. The purpose of the Principles is to guide the design of environments, products and communications. According to the Center for Universal Design in NCSU, the Principles "may be applied to evaluate existing designs, guide the design process

and educate both designers and consumers about the characteristics of more usable products and environments."

These guidelines were put in place for architecture, primarily. But ramps and curb cuts and other accessible options serve all of us.

- Principle 1: Equitable Use
- Principle 2: Flexibility in Use
- Principle 3: Simple and Intuitive Use
- Principle 4: Perceptible Information
- Principle 5: Tolerance for Error
- Principle 6: Low Physical Effort
- Principle 7: Size and Space for Approach and Use

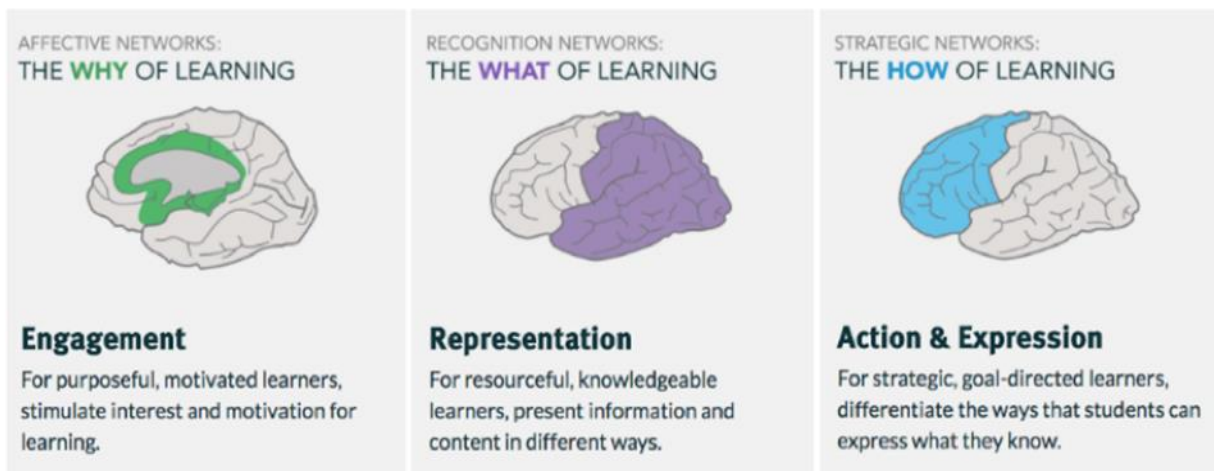
When we look at education and learning, Universal Design principles can be applied also, creating an atmosphere of access for everyone to use and not limiting additional assistance to a few. Consider the three principles for Universal Design for Learning (UDL):

There are three basic principles to UDL, and before we go on to the part about how to apply it in the classroom, these principles need to be highlighted. Each corresponds to a different part of the human brain that is involved in the learning process and each affects a student's learning outcomes in its unique way.

- UDL provides **multiple means of representation**. This answers the **WHAT** of learning. Teachers should therefore present information and learning content in more than one way. There are multiple options for customizing instructional delivery, from offering alternatives for auditory or visual information to guiding information processing and manipulation. This diversity in how students get new information helps them be resourceful, knowledgeable learners.
- UDL provides **multiple means of action and expression**. This answers the **HOW** of learning. Some students enjoy being in the center of attention and present slides of something they learned. Others prefer the more traditional way of writing an essay on what they learned, yet others might be very happy to create a physical model

of a new concept they got to master. By being able to demonstrate their learning through more than one standard way, students become more strategic, and goal-directed learners.

- UDL provides **multiple means of engagement**. This answers the **WHY** of learning. Motivation is a crucial factor determining the success of the learning process. Every lesson must spark an interest in students' minds and teachers need to identify the best way to achieve this, whether by providing options for sustaining effort or self-regulation to insuring a greater degree of student agency and individual choice. This will help students become more purposeful in their learning process and more motivated.



Universal Design for Learning (UDL) by CAST www.cast.org

The above graphic shows the areas of the brain that are used when a person is in engaging in learning practices. This graphic is also a link to CAST for more information

STUDENT RESOURCES

At OCCC we are committed to incorporating Universal Design in Learning principles on campus. We offer assistive technology, low- and high-tech options and we have many suggestions to manage some of the barriers that exist for students.

Our intent is to provide several assistive tools to promote greater access to learning. We will be adding voice recorders, note taking assistance pens with the ability to record a lecture and capture notes electronically, noise cancelling headphones and earplugs, and encouraging simple classroom changes for greater engagement.

There are many people and resources to help students at Oregon Coast Community College. Student success remains at the top of OCCC's mission. Student success has many elements and OCCC encourages you to develop your strengths and self-advocacy skills.

Cindy Carlson, Dean of Students

Dana Gallup, Student Services

Darci Adolf, Librarian

Career and Transfer Readiness Center

QUICK LINKS TO SELF-ADVOCACY RESOURCES

[Self-Advocacy for College-+ Students](#)

Ideas to become your own best advocate.

[10 Quick Strategies for Stress Management](#)

Stress is a common issue when juggling classes and homework with the rest of your life.

[Equation of Success: Top Ten Responsibilities that Students Must Own](#)

Ideas from experts on how to own your success in school.

[Calm Clinic](#)

This website has many links to many ideas for keeping calm mentally and physically.

[Chronic Illness](#)

Resources for surviving college with a chronic illness.

[When You're in a Slump](#)

Ideas for rejuvenation.

[Student Stress and Anxiety](#)

Find help when anxiety flares up.

[Students and Disabilities College Guide](#)

Contains helpful information so you know your rights and where to seek help.

STUDENT SUCCESS

We want you to have a successful experience here at OCCC. Here's some information we think will help:

If you are having trouble in a class:

At the first signs of trouble in a class, get help! Here are some early suggestions:

Ask:

- questions in class. Don't be afraid to say, "I don't understand."
- classmates if they would be interested in setting up a study group.
- for clarification on points you don't understand
- for tips on how to learn the material
- what to focus on for tests
- if there are additional study guides/materials you could use for extra practice

- if there are any study groups formed by students in your class or other sections of the course

Request Help:

- Explore what kinds of general tutoring services you have on your campus.
- Talk to disability services personnel to get connected with additional information.
- Contact your instructor during office hours. Besides getting the help you need; this contact shows your instructor that you are interested in the course and want to succeed.

Find a peer notetaker or other notetaking support option

- Find a classmate who is willing to share their notes
- Utilize the recording app on your smartphone or laptop. Laptops are available to check out at the library
- Check in with disability services for additional ideas and technology

Matching your learning style with an instructor's teaching style

All students have their own personal style of learning: how they take in, process, and remember information, how they study, how they demonstrate what they've learned, and how they get along with instructors and classmates. Successful students know that matching their learning style with an instructor's teaching style is a critical factor in passing a class. They take the time to research instructors' class format and personality before they sign up for a class by asking classmates, other instructors, and Disability Services staff for recommendations, and by interviewing potential instructors.

- Set up an instructor interview or contact them via email.
- Make an appointment to meet the instructor. You can do this by emailing or calling the instructor or speaking directly during office hours. Explain clearly why you wish to meet and ask for a time that is convenient.
- The interview is a good time to make a positive first impression with your instructor: Be on time, be courteous, dress appropriately, and have a list of questions ready.

- Plan ahead of time for the type of accommodations you will need during this meeting (a sign language interpreter, an aide to write notes, a tape recorder). Make the necessary arrangements with Disability Services in advance.
- Have a good idea of your own learning style so that you are better able to discuss your needs. If you are unsure about your learning style, ask your counselor for ways to gain this insight.

Points To cover in an instructor interview

- Course requirements: homework, research papers, oral presentations, labs, outside projects, group projects, class attendance, class participation.
- Tests: number, type (multiple-choice, true/false, essay, fill-in), pop quizzes, in-class or take-home, open book and notes, amount of notice given to prepare, what material is covered (text, outside readings, lecture notes, homework, labs), comprehensive final, make-up exams.
- Required readings: number of texts required, amount of material to be covered each class session, any outside readings in the reserve library.
- Class style and format: lecture, all-group discussion, small group discussion or activities, films, guest speakers.
- The instructor: available to students, willing to give extra credit projects, accepts late assignments, past experience with students with disabilities.
- Textbook: Ask to see a copy of the textbook to be used. Is it well-organized and clear? Does it have a glossary, key terms at the end of each chapter, study questions, and a supplemental workbook? Is it already available in an alternate media format from the publishers?
- Syllabus: Ask to see a course syllabus (an old one is fine if one is not ready for the upcoming term). Are the requirements clear? Are the reading assignments and other due dates provided? Does it look like the instructor has a general plan for the term or will the course evolve over the term?

Other Helpful Tips

- Visit the campus bookstore and review the textbooks used for the course you're interested in.
- Get permission from the instructor to visit a class session.

- Read student reviews of instructors on the Rate My Professors website.
- Check instructors' websites.

INSTRUCTOR RESOURCES

Universal design for learning (UDL) is a framework to improve and optimize teaching and learning for all people based on scientific insights into how humans learn.

There are many resources online for Universal Design for Learning (UDL), here are the most basic guidelines for making your course accessible according to UDL guidelines.

Here are a few links to learn more about Universal Design in Learning (UDL) as it applies to education and learning:

- The Center for Applied Special Technology (CAST) has done some phenomenal work with Universal Design for Learning and have done so through a [brain science](#) based approach. The [UDL on Campus website](#) has a lot of great information, including a section on [Accessibility and Policy](#).
- The California State University system offers [UDL-Universe: A Comprehensive Universal Design for Learning Faculty Development Guide](#) which includes guidance for course redesign workshops, syllabus rubrics, and research on student outcomes.
- [The University of Washington's DO-IT program](#) has been offering guidance around the implementation of Universal Design for decades through a variety of demonstration projects. Their work builds off the 7 principles of Universal Design first articulated by Ron Mace for use in the field of architecture. Here is a DO-IT article titled [Universal Design in Education: Principles and Applications](#)
- The University of Minnesota also received funding for a Universal Design demonstration project, and produced the [PASS-IT Universal Design Book](#) (free download) which offers excellent write-ups from a variety of perspectives. Consider also the faculty and student guides available on this website.

Here is a collection of short videos from CAST:

- This video discusses [Accessibility and Universal Design in Learning](#).
- This video discusses [UDL and Assessment](#).
- This video discusses [Innovation at the Margins](#).

Here are some additional options:

- [The Myth of Average](#) (18-minute long TedX Talk)
- [Transforming Inclusive Education](#) (3 minutes on the 7-10 split)
- [We can Build Better Solutions](#) (13 minute Tedx Talk)

[cast-5-expert-learners-1.pdf](#)

[cast_10_engagement.pdf](#)

[cast-10-assessment-2015-10-20.pdf](#)

[CAST-Professional-Learning-udl_top_10_learning_goals.pdf](#)

[cast-5-learning-environs.pdf](#)

[cast-5-stereotype-threat-r.pdf](#)

[This is a link to the following article, Universal Design of Instruction \(UDI\)](#)

Universal Design of Instruction (UDI)

Universal design principles can be applied to any instructional product or environment. Using the CUD format, UDI can be defined as the design of instructional products and environments

to be usable by all students to the greatest extent possible, without the need for adaptation or specialized design.

When designing on-site or online instruction, UD challenges the instructor to create a learning environment that allows all students, including a person who happens to have a characteristic that is termed "disability," to access the content of the course and fully participate in class activities. Universal design principles can be applied to lectures, classroom discussions, group work, handouts, web-based instruction, fieldwork, and other academic activities.

Below are examples of instructional methods that employ principles of universal design. They are organized under eight performance indicator categories, with a goal statement for each. Applying these strategies can make your course content accessible to people with a wide range of abilities and disabilities, ethnic backgrounds, language skills, and learning styles.

1. **Class Climate.** Adopt practices that reflect high values with respect to both diversity and inclusiveness. Example: Avoid stereotyping. Offer instruction and support based on student performance and requests, not simply on assumptions that members of certain groups (e.g., students with certain types of disabilities or from a specific racial/ethnic groups) will automatically do well or poorly or require certain types of assistance.
2. **Interaction.** Encourage regular and effective interactions between students and the instructor and ensure that communication methods are accessible to all participants. Example: Promote effective communication. Employ interactive teaching techniques. Face the class, speak clearly, use a microphone if your voice does not project adequately for all students, and make eye contact with students. Consider requiring a meeting with each student. Supplement in-person contact with online communication. Use straightforward language, avoid unnecessary jargon and complexity, and use student names in electronic and in-person communications.
3. **Physical environments and products.** Ensure that facilities, activities, materials, and equipment are physically accessible to and usable by all students, and that all potential student characteristics are addressed in safety considerations. Example: Arrange instructional spaces to maximize inclusion and comfort. Arrange seating to encourage participation, giving each student a clear line of sight to the instructor and visual aids and allowing room for wheelchairs, personal assistants, sign language interpreters, captionists, and assistive technology. Minimize distractions for students with a range of attention abilities (e.g., put small groups in quiet work areas). Work within constraints to make the environment as inclusive as possible. encourage administrators to apply UD

principles in facility design and renovation.

4. **Delivery methods.** Use multiple, accessible instructional methods that are accessible to all learners. Example: Provide cognitive supports. Summarize major points, give background/contextual information, deliver effective prompting, and provide scaffolding tools (e.g., outlines, class notes, summaries, study guides, and copies of projected materials with room for notes). Deliver these materials in printed form and in a text-based electronic format. Provide opportunities for gaining further background information, vocabulary, and practice.
5. **Information resources and technology.** Ensure that course materials, notes, and other information resources are engaging, flexible, and accessible for all students. Example: Select materials early. Choose printed materials and prepare a syllabus early to allow students the option of beginning to read materials and work on assignments before the course begins. Allow adequate time to arrange for electronic and other alternate formats to be obtained.
6. **Feedback and Assessment.** Provide specific feedback on a regular basis using multiple, accessible methods and tools, and adjust instruction accordingly. Example: Provide regular feedback and corrective opportunities. Allow students to turn in parts of large projects for feedback before the final project is due. Give students resubmission options to correct errors in assignments and exams. Arrange for peer feedback when appropriate.
7. **Accommodation.** Plan for accommodations for students whose needs are not met by the instructional design. Example: Know how to arrange for accommodations. Know campus protocols for getting materials in alternate formats, rescheduling classroom locations, and arranging for other accommodations for students with disabilities. Ensure that the course experience is equivalent for students with accommodations and those without.

Consult [Equal Access: Universal Design of Instruction](#) for a comprehensive list of examples of UDI strategies. View the corresponding video for an overview of UDI. Consult Universal Design of Physical Space for information about designing inclusive instructional space. View the corresponding [video](#) for an overview of UDI. Consult [Universal Design of Physical Spaces](#) for information about designing inclusive instructional spaces.

As represented by UDI application area 7 above, employing universal design principles in instruction does not eliminate the need for specific accommodations for students with disabilities. There will always be the need for some accommodations, such as sign language interpreters for students who are deaf. However, applying universal design concepts in course planning will ensure full access to the content for most students and minimize the need for specific accommodations in the future. For example, designing web resources in accessible format as they are developed means that no re-development is necessary if a blind student enrolls in the class; planning ahead can be less time-consuming in the long run. Letting all students have access to your class notes and assignments in accessible formation on an accessible website can eliminate the need for providing materials in alternative formats.

Example

Besides classroom instruction, Internet-based distance learning courses can be designed to be accessible to the broadest audience. To learn how, consult the DO-IT publications [Real Connections: Making Distance Learning Accessible to Everyone](#) , [Equal Access: Universal Design of Distance Learning](#), and [20 Tips for Teaching an Accessible Online Course](#).

Check Your Understanding

Employing UD principles to fully include one group of students can generate unanticipated benefits to others. Select from the list below those students who might benefit from captioning of videos.

1. Students for whom English is a second language
2. Students who are deaf
3. Students with visual impairments
4. Students in a noisy environment
5. Students who have learning disabilities

Feedback on Responses:

1. Students for whom English is a second language
Yes, captioning can benefit students for whom English is a second language. Often their reading skills are better than their spoken English skills.
2. Students who are deaf
Yes, captioning provides access to deaf students.

3. Students with visual impairments

Captioning is generally not useful for students with visual impairments, but there is one exception: students who are deaf and have low vision (i. e., they can see large print) can benefit from captioning if the captions are large enough for them to see.

4. Students watching the video in a noisy environment

Students in a noisy environment will benefit from captioning. Students who have learning disabilities Some students with learning disabilities comprehend material better when they both see text and hear it spoken aloud. They benefit when videos are captioned.

5. Students who have learning disabilities

Some students with learning disabilities comprehend material better when they both see text and hear it spoken aloud. They benefit when videos are captioned.

Consult [Published Books and Articles About Universal Design in Higher Education \(UDHE\)](#) for more information about UD, especially how it can be applied in educational settings.

Specific Applications of UDI

Employing UD principles in everything we do makes an inclusive world for all of us. It creates an accessible environment, minimizing the need for accommodations to be made for specific individuals.

Universal design strategies can be applied to specific instructional practices. Access the following sections of [The Faculty Room](#) to learn more:

- [Technology](#)
- [Computer Labs](#)
- [Design and Art](#)
- [Distance Learning](#)
- [Fieldwork](#)
- [Group Work/Discussions](#)
- [International/Travel Programs](#)
- [Lectures](#)
- [Science Labs](#)

- [Test Taking](#)
- [Web Pages](#)
- [Work-Based Learning](#)
- [Writing Assignments](#)

The Process of UDI

The principles of universal design can be employed in the development and delivery of any course curricula, classroom activity, or student assessment. To apply universal design, the instructor can take the following steps, followed by further explorations.

1. Identify the course. Describe the course, its learning objectives, and its overall content.
2. Define the universe. Describe the overall population of the students eligible to enroll in the course and then consider their potential diverse characteristics (e.g., with respect to gender; age; ethnicity and race; naive language; learning style/preference; and abilities to see, hear, manipulate objects, read, and communicate).
3. Involve students. Consider perspectives of students with diverse characteristics as identified in Step 2, in the development of the course. If they are not available directly from students, gain student perspectives through diversity programs such as the campus disability services office.
4. Adopt instructional strategies. Adopt overall learning and teaching philosophies and methods (e.g., differentiated instruction, construction, computer-assisted instruction, the "flipped" classroom) and integrate them with universal design practices to ensure the full inclusion of all students.
5. Apply instructional strategies. Apply UD strategies in concert with good instructional practices (both identified in Step 4) to the overall choice of course teaching methods, curricula, and assessments. Then apply UD to all lectures, classroom discussions, group work, handouts, web-based content, labs, fieldwork, assessment instruments, and other academic activities and materials to maximize the learning of students with the wide

variety of characteristics identified in Step 2.

6. Plan for accommodations. Learn campus procedures for addressing accommodation requests (e.g., arranging for sign language interpreters) from specific students for whom the course design does not automatically provide full access. Include this information in the syllabus.
7. Evaluate. Monitor the effectiveness of instruction through observation and feedback from students with the diverse set of characteristics identified in Step 2, assess learning, and modify the course as appropriate.

Getting Started

Looking at all of the suggestions for applying universal design of instruction may seem overwhelming. The great thing about universal design, however, is that it can be applied incrementally. For example, a department might begin by working through an existing diversity committee or a new task force to explore ways of making the department more welcoming and accessible to everyone. For specific disciplines to use in such efforts, consult [Equal Access: Universal Design of an Academic Department](#) and [Equal Access: Universal Design of Computing Departments](#). An individual faculty member could use the [UDI Checklist](#) to improve their teaching. Members of a task force or a faculty, maybe could use an appropriate checklist as follows:

- As they go through the checklist cross off checklist items not applicable in their course/department
- Note as "done" those that have already been implemented
- Label with a recommended deadline date for addressing the issue

Using the online version of the checklist, they could order the items by date and add additional notes as appropriate. An instructor can then use the resulting document to guide their improvements to make more accessible. Presenting the timeline to the department decision-maker on diversity issues could be the next step in using a department checklist. Once approval is secured, assigning staff and, when needed, securing budget funds could move the project along.

Review the [Applications of Universal Design](#) for further information about UD applications and processes. Consult the following sections of The Faculty Room to learn about access challenges and solutions for students with specific types of disabilities. An accommodation provided for a

student with a disability can inspire a UD strategy to offer to all students. For example, a deaf student may need a video to be captioned. this request could inspire you to caption all of your videos in the future. For examples for how accommodations that could benefit students on the autism spectrum can inspire an instructor to offer the strategy to all the students as an UDI practice to benefit all students. Consult the following article [Applying Universal Design to Address the Needs of Postsecondary Students on the Autism Spectrum](#).