



*Ability
Reimagined*

Accessible Education Center (AEC)
Faculty & Staff Guide

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FORWARD

The Accessible Education Center (AEC) is an integral part of Gavilan College. Thousands of Gavilan students have benefited from our services, and they have achieved their academic goals. As a staff member, your positive attitude and understanding of the needs of students with disabilities is very much appreciated.

Whether you are an instructor, support staff member, or an administrator at Gavilan College, you play an essential role in the success of all students. We recognize that working with students with disabilities can present unusual challenges. The staff from the Accessible Education Center (AEC) is here to help you meet those challenges. It is our hope that you will consult with us on any concerns or questions you may have.

This guide presents information regarding the Accessible Education Center. It contains a brief description of some of the disabilities and health limitations that students may have here on campus, as well as an explanation of the laws and regulations that pertain to individuals with disabilities. Instructors will need some suggestions for how to provide accommodations to students and tips on learning styles and instructional strategies.

After reviewing this guide, feel free to contact the Accessible Education Center if you have questions about our services, or about a student with whom you have had contact. On the Gilroy campus, our program is located in Library 117 (LI 117). The telephone number is (408) 848-4865.



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Learning Assistance Program of Allan Hancock College
for sharing their Faculty Guide with us.



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Accessible Education Center (AEC)

PHILOSOPHY

We acknowledge that individuals who have psychological, physical or learning disabilities are capable of growth and learning. We believe these individuals are in a constant state of change and growth, thereby accepting the concept that by right and competency, individuals with disabilities have the same constitutional rights as any other citizen to life-long learning opportunities that enable them to become confident, self-reliant, productive, independent citizens.

MISSION STATEMENT

The Accessible Education Center (AEC) provides students with disabilities quality and excellence in programs, services and support which enhance the quality of community life, and the development of individual potential for a global environment. The AEC strives to equalize student educational opportunities and to support as well as educate the faculty, staff and the community.





LEGISLATION PERTAINING TO POSTSECONDARY EDUCATION AND DISABILITIES

There are three federal laws that are considered key elements in enhancing the participation of individuals with disabilities in postsecondary settings. They are:

Section 504 of The Rehabilitation Act of 1973

Section 504 is civil rights legislation that prevents discrimination solely on the basis of disability for otherwise qualified persons. “Otherwise qualified,” means a student who has the academic and intellectual potential to succeed in a given course, and who has a disability recognized under this law. Among other things, a person with a disability is defined as someone who has a physical or mental impairment that substantially limits one or more major life activities. The guidelines derived from the law pertain to any postsecondary education entity receiving federal funds directly or indirectly.

Americans With Disabilities Act (ADA) of 1990

The ADA extended the provisions of the Rehabilitation Act of 1973 to employers, government entities, such as postsecondary educational institutions, and private entities that serve the public. However, unlike Section 504, the ADA's regulations apply regardless of whether or not a business or organization receives federal funds. Title II of the ADA states that:

No qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of public entity, or be subject to discrimination by any public entity. It states that the phrase physical and mental disability includes “specific learning disabilities” (PL. 101-336 Subpart A-35.104).

The Americans with Disabilities Act has dramatically changed the landscape of educational institutions and provided equal access and opportunities for students with disabilities. Faculty members are key to delivering instructional adjustments and accommodations and ensuring educational success for students with disabilities.

Section 508 of the Rehabilitation Act of 1973

This section of the Rehabilitation Act was originally designed to ensure that the federal government itself would provide equal access to citizens with disabilities in electronically distributed information and services. Although Section 508 does not specifically apply to entities outside the federal government, its impact has been far reaching. The accessibility standards for information technology that developed following its passage have been adopted and improved upon by other organizations. In addition, the Americans With Disabilities Act mandates equal access to electronic media. The combination of these laws has strengthened universal electronic access and promoted recognized standards and resources for Web developers worldwide.

In March 2003, the General Counsel of the California Colleges Chancellor's Office issued Legal Opinion M 03-09, which states that Section 508 applies to California community colleges. Therefore, information technology developed, purchased, or licensed by California community colleges must comply with the requirements of Section 508.

In light of the Chancellor's Office Legal Opinion M 03-09, Section 508 requires the application of electronic equipment in a manner that accommodates the functional limitations of individuals with disabilities so as to provide access to information resources such as video or multimedia. Multimedia includes, but is not limited to, video materials, narrated slide production, and computer-generated presentations. The law requires captioning and/or audio description for certain training and/or informational multimedia productions developed or procured for instructional purposes. The law also requires all training and informational video and multimedia productions which contain visual information necessary for the comprehension of the content, to be audio described.

Classroom and Institutional Accommodations

The following list illustrates some of the practices that instructors and staff may need to be aware of in accommodating students with disabilities:

- All possible efforts need to be made to include students with disabilities in classes or college activities, including field trips.
- Modifications of individual course or degree requirements may be necessary in some cases, without lessening rigor.
- Some students may find it necessary to digitally record lectures, and instructor rules against this may need to be suspended.
- Other auxiliary aids may be necessary for students to be able to participate fully in the classroom.



- See the appendix for a list of these aids.
- The college's Web pages and electronic media used in instruction must be accessible to students with disabilities.
- Video materials must be captioned.
- Alternative testing and evaluation methods for measuring student achievement may be necessary for students with impaired sensory, manual or speaking skills.
- The location of a class may need to be changed if it is not accessible to a student with a mobility limitation.
- Students should not be counseled toward more restrictive goals or careers than students without disabilities, unless such counsel is based on strict licensing or certification requirements in a profession.



GENERAL SUGGESTIONS FOR CLASSROOM INSTRUCTORS

The legislation in the previous section was written to prevent discrimination based on disability, and to ensure the inclusion of students with disabilities in higher education. However, given the broad range of students with disabilities and their needs, knowing what to provide students and what is appropriate for them is not always easy.

The Accessible Education Center staff assists students to participate as fully as possible in the college's classes and activities. It also consults with staff members who may need information on how to work most effectively with these individuals. We may train students in the use of technological tools that allow them to more easily use curriculum materials, or help them gain better access to facilities. For students with learning disabilities, we often teach them new approaches to studying which lets them capitalize on their strengths. As needed, we also advocate for students, and advise them to advocate for themselves.

“Reasonable accommodations” is a key term in disability rights legislation. However, it is not always clear what that means in the educational setting. In essence, a student with a documented disability may need to use certain provisions that enhance his or her opportunities for success in the class without fundamentally altering the course or lessening its rigor. Two examples might be the use a sign-language inter-

preter for a deaf student, or having large print materials available for a student with low-vision.

It is your responsibility as an instructor to allow or provide the accommodations. It is the student's responsibility to fulfill the academic requirements of the course. The best solutions result when the instructor, student, and the Accessible Education Center work cooperatively. Meeting as a group may facilitate problem-solving alternatives. Respecting the privacy of the student by not discussing his or her disability or accommodations with others outside of this meeting is essential. Review accommodations periodically with the student to assess effectiveness and adjust to changing needs. Not all accommodations are reasonable. An accommodation is not reasonable if:

- Making the accommodation or having the individual involved in the activity poses a direct threat to the health or safety of others.
- Making the accommodation means making a substantial change in an essential element of the curriculum.
- Making the accommodation would require a substantial alteration in the manner in which educational opportunities are provided, such that the course objectives are altered.

The following items may be of help to you as you work with students. In addition, you will find more suggestions for accommodations as you read the sections on specific disabilities.

- It would be helpful at the beginning of each semester for instructors to make an announcement inviting students who may need accommodations to discuss their needs during office hours. A statement on the syllabus with this information would also be beneficial.
- All possible efforts should be made to include students with disabilities in classes or college activities, including field trips. Don't assume what a student's limitations might be.
- One of the best sources of information about a student's particular needs is the student. One should not hesitate to make inquiries privately with a student with a disability; most appreciate an objective approach to assessing and resolving any barriers to their full participation in the classroom.

Not all students with disabilities are aware of our services. If it appears that a student needs special learning aids such as special testing procedures, sign language interpreting, digital recording of classes, assistance getting to classes, etc.,



would be beneficial to ascertain whether the student is aware that these services are available through the Accessible Education Center. If at all possible, make available a detailed course syllabus prior to registration. The syllabus will help in the event that audio textbooks or captioned materials need to be ordered.

Modifications of course or degree requirements may be necessary in some cases, without lessening rigor. Some students may find it necessary to record lectures. Instructor rules against this may need to be suspended.

Other auxiliary aids may be necessary for students to be able to participate fully in class. See the appendix for a list of these aids. If a deaf student is in your class, make sure that the interpreter and the student are situated so that the student can comfortably see you and the interpreter at the same time. Video materials presented in class must be captioned.

Students with mobility problems may need assistance finding a comfortable space in the classroom.

Accommodations:

The effects of these health problems vary by degree, and they may occur in combination with other conditions. Some of them cause chronic pain or weakness, and others may affect a student's ability to attend class regularly. Decisions as to appropriate accommodations should be made on a case-by-case basis, after consulting with the student. Below are some common strategies or services utilized by students with health impairments.

- Note takers or sharing notes with classmates.
- Extended time for assignments.
- Excused absences for medical episodes.
- Testing accommodations (out of class testing with extended time).
- Audio or electronic textbooks.
- Lab assistants.
- Print magnification software or other assistive computer technology.
- The student may need to drink or eat while in class due to the side effects of medications.



HEALTH IMPAIRMENTS

There are a number of health conditions that can make college especially challenging for students. When a student with health impairment requests accommodations, feel free to check with the Accessible Education Center to understand how the impairment will impact the student, and that the requested accommodation is appropriate for his or her situation.

Some common health impairments:

Epilepsy	Diabetes
Chronic fatigue syndrome	Sickle cell anemia
Stroke	HIV
Cancer	Cystic fibrosis
Asthma	Chronic pain
Cardiac disease	Lupus Multiple
Renal failure	Fibromyalgia
Carpal tunnel syndrome	Sclerosis
Orthopedic limitations	Crohn's Disease



THE STUDENT WITH CEREBRAL PALSY

Cerebral palsy is caused by abnormalities in parts of the brain that control muscle movements (National Institute on Neurological Disorders and Stroke, 2008). The student with cerebral palsy may exhibit the following symptoms in a wide spectrum of intensity: paralysis, weakness, problems with coordination and fine motor skills, or any other abnormality of motor function due to a disorder of the motor centers of the brain. In addition, some individuals with cerebral palsy experience seizure disorders (see section on epilepsy). Many of the limitations manifested by persons with cerebral palsy such as speech, hearing, and ambulation disorders are covered in other sections of this guide.

Classroom Considerations:

- Try to place the student in an area of the classroom that is relatively free of distractions.
- If the student is in a wheelchair, make sure the classroom is easily accessible.
- Seat the student where he or she can easily get from the wheelchair to the desk and vice versa, if applicable.



- Due to a difficulty taking notes, the student may ask to digitally record lectures, or ask another student to share notes.
- The student may need to request a scribe for exams through the AEC services.
- If the student is having difficulty with anything written on the board, refer him or her to the AEC for note-taking services and encourage a volunteer note-taker when the request is made.
- If the class requires oral presentations, and the student has difficulty speaking, he or she may need to do alternate assignments. Don't hesitate to ask the student what you can do to help him or her participate more fully in the class.



THE STUDENT WITH EPILEPSY OR SEIZURE DISORDER

Epilepsy is a term used to describe a disorder of the central nervous system that is characterized by repeated seizures or convulsions resulting from a storm of uncontrolled electrical discharges in the brain. Epilepsy is classified according to the type and severity of the seizures experienced. Most students with epilepsy will have one of the following most common types of epilepsy:

1. **Grand Mal** seizures that take the form of blackouts and violent shaking of the entire body, irregular breathing, drooling, and pale blue color in face and fingernails. Some experience a warning called “aura” which can be manifested in the form of an unexplained feeling of fear, unpleasant odors, peculiar sounds, or tingling of skin. After the seizure, the individual may be confused or tired and will be amnesic concerning the episode.

2. **Petit Mal** seizures occur most often in younger individuals. Other signs of this type of seizure may be rapid blinking of the eyes and/or small twitching movements. After a seizure, the individual will go back to what he or she was doing before it occurred with no knowledge of what has transpired during the seizure.

It is very rare for a student to have a seizure while in class since most of these disorders are well controlled by

medication. However, should a seizure occur, a calm response from instructor and students is crucial to the student’s psychological and academic adjustment in the classroom.

If a seizure occurs:

- **Keep calm and follow the college emergency procedures.** You cannot stop a seizure once it has started. Do not restrain or try to revive the individual.
- **Clear the area** around the individual of hard, sharp, or hot objects, which could cause injury.
- **Carefully observe** the individual's actions during the seizure for a full medical report later. When the seizure is over, let the individual rest if he or she wishes.

Classroom Considerations:

Except in extreme circumstances, most students with seizure disorders do very well in college and university settings. Unfortunately, the side effects of the medications that control seizures can cause problems in learning. These can include drowsiness, dizziness, and confusion or slowdown in thought processing. The following accommodations may be helpful to these students:

- Providing the student with the opportunity to take tests outside of class and with extended test time.
- Finding a student who would be willing to share lecture notes if this is a problem for the student.
- Allowing additional time for the completion of assignments when appropriate.



STUDENTS WHO ARE DEAF



Students who are deaf have little or no functional hearing and many must rely on sign language interpreters to communicate adequately with hearing persons. The challenges faced by deaf individuals are in great part due to the language differences between spoken and written English, and those of a visual, signed language. Depending on the student's circumstances, there may be cultural components that play a role as well.

Sign language is not a signed version of English. American Sign Language is considered a legitimate language unto itself, with unique grammatical and syntactical components.

Students, who were born deaf, especially to deaf parents, primarily identify and associate with other deaf individuals. These deaf communities make up a larger deaf culture, with its own set of accepted norms, history, and language.

Lip reading is often very difficult for these individuals, since they have never heard English. Mastering written English is a formidable task, since many of the components of English are not present in sign language. It is also much easier to learn to write a language one has heard from birth, and of course this is not possible for deaf people.

Students who become deaf after learning English often have fewer of the problems noted above with regard to written English. They also may be more proficient at lip reading. However, even under the best circumstances, deaf people will be able to understand less than fifty percent of what is being said. Some deaf people wear hearing aids. These devices may augment hearing to the point where lip reading is more efficient, but hearing is still not at a normal level.

Classroom Considerations:

- Having an interpreter in the classroom at first may seem to be a distraction. However, the novelty will quickly wear off and should not present an ongoing problem.
- Make sure the student sits near the front of the classroom so you can be seen easily. The student should be able to see both you and the interpreter. If the student is using real time captioning services, he or she will need to sit at a desk or table that is large enough to accommodate their working space as well as a laptop computer to read the captioning being provided.
- Do not lecture as you write on the chalkboard with your back to the class. Your facial expressions are a very important part of communication. Seeing your face is vital for those students who depend on lip-reading, an interpreter, or real time captioning to supplement your speech.
- Speak at a normal rate without exaggerated lip movement.
- When speaking to a deaf or hard of hearing student, speak directly to the student, not to the interpreter or captioner.
- Use an overhead projector and visual aids as much as possible. Such aids allow you to face the class and are very helpful for all students, especially those with hearing problems.
- Use captioned films or videos. Captioning (or subtitling) makes the presentation accessible to students who are deaf or hard of hearing and more memorable for all students.
- If you schedule slide shows or other presentations that require turning off the lights, plan to leave enough light for the student and the interpreter to see each other clearly.
- If possible, list major topics of the lecture or discussion on the board as they are presented. If the deaf student knows the specific topic or emphasis of discussion, the individual can follow the spoken information more easily.
- If you plan to read aloud in class, pass out copies of the article, report, etc. and allow time for the students to read the material in advance.
- Since the deaf student must focus his or her attention on watching the lecturer/interpreter for optimum understanding, careful and copious note taking is difficult. The student will need to have access to lecture notes from a note taker or the instructor, or copies of notes from a fellow classmate.
- At the beginning of a session or after an interval of silence, draw the student's attention before speaking. Make eye contact or tap gently on the student's shoulder or desk.
- When calling on a student who is deaf, make sure you establish eye contact first. When possible, provide the students with class outlines, lecture notes, reading assignments, lists of new technical terms and printed transcripts of audio and audio-visual materials.
- Provide copies of the class text and handouts to the interpreter ahead of time. If you plan to read items aloud in class, provide copies to the interpreter the day before.
- Provide the student with all assignments, deadlines, test schedules, and grading policies in written form.
- Encourage the deaf student to ask questions immediately after class to clear up any confusion he or she might have about the lecture material or assignment.

Please see the following section on using sign language interpreters or real time captioning services in the classroom.



STUDENTS WHO ARE HARD OF HEARING



Hearing loss is the most common physical disability in the United States. There are more than 15 million adults and 3 million children who have some degree of hearing loss, so you are likely to encounter it occasionally

among students in your classes. Contrary to popular belief, hearing problems of even a mild degree interfere with hearing and communication to a much greater extent than visual problems do.

The person with a hearing loss, even with a hearing aid, must often depend upon a sign language interpreter, real time captioning, or speech reading (lip-reading) to understand much of what is said to him or her. A hearing aid or other amplification device makes speech louder and easier to hear, but not necessarily clearer, so normal word understanding is rarely achieved.

Classroom Considerations:

- Make sure the student sits near the front of the classroom so you can be seen easily. The student should be able to see both you and the interpreter. If the student is using real time captioning services, he or she will need to sit at a desk or table that is large enough to accommodate their working space as well as a laptop computer to read the captioning being provided.
- Some students will need to use a small FM system in class. This consists of a transmitter that carries your voice to the student via a receiver. The receiver transmits the signal directly into headphones or to the student's hearing aids. If the use of an FM system is necessary, the student will show you how to operate the transmitter.
- Many of Gavilan's large classrooms have built-in Assisted Listening Devices. Encourage your student to visit the AEC, so they can check out the headset for use in your classroom.
- Face the student when you speak, and keep your face visible. Speak clearly and naturally.
- Avoid lecturing while standing with your back to a window. This throws a shadow over your face, making it difficult to read.
- Speak at a normal rate without exaggerated lip movement.
- Repeat the questions and comments of others in the room.
- Use an overhead projector and visual aids as much as possible. Such aids allow you to face the class and are very helpful for all students, especially those with hearing problems.
- Use captioned films or videos. Captioning (or subtitling) makes the presentation accessible to students who are deaf or hard-of-hearing and more memorable for all students.
- If possible, list major topics of the lecture or discussion on the board as they are presented. If the deaf or hard of hearing student knows the specific topic or emphasis of discussion, the individual can "key into" or follow the spoken information more easily.
- Since the deaf student must focus his or her attention on watching the lecturer/interpreter for optimum understand-

ing, careful and copious note taking is difficult. The student will need to have access to lecture notes from a note taker or the instructor, or copies of notes from a fellow classmate.

- Provide the student with all assignments, deadlines, test schedules, and grading policies in written form.
- Encourage the hard of hearing student to ask questions immediately after class to clear up any confusion the individual might have had about the lecture material or assignment.



USING A SIGN LANGUAGE INTERPRETER OR CAPTIONER IN THE CLASSROOM

Things to Remember:

- The interpreter's responsibility is to translate what is said in the classroom into sign language and interpret what is communicated by the deaf student into spoken English.
- The interpreter or real-time captioner is not a tutor or teacher's aide.
- When speaking one-on-one to the deaf student, speak directly to the student. Avoid using phrases such as "ask him" or "tell her." Phrase your comments directly to the student.
- During classroom discussions, the interpreter may ask you to repeat students' comments or questions if he or she was not able to hear the student.
- For lecture classes that are two or more hours long, two interpreters will be scheduled. The interpreters will switch every 20 to 30 minutes. This time limit is a standard interpreting practice that helps to reduce wrist injuries such as tendonitis and carpal-tunnel syndrome.
- When copying handouts for your class, please make extra copies for the interpreters. It is also helpful if the interpreters receive access to the textbooks you are using for your class.
- Speak at a normal pace and volume. It is not necessary for you to slow down or pause to allow the interpreter to catch up with you. However, occasionally, the interpreter may ask a speaker to slow down if he or she is speaking too quickly.
- If you need to get the deaf student's attention, tap him or her gently on the shoulder, wave your hand in his or her line of sight, or gently tap the table or desk at which he or she is working.
- The deaf student will need to sit in front of the classroom so that he or she can see you clearly. Normally, sitting in the front row is preferred; however, ask the student where he or she feels the most comfortable. The interpreter will sit or stand close to you so that the student can see both you and the interpreter clearly.



Remember that even when using an interpreter, it is important for the deaf student to see your face. Lecturing while writing on the chalkboard or pacing around the room may make communication less effective for the deaf or hard-of-hearing student. You may want to try using an overhead projector or having an outline already printed on the board before you start to speak.

Remember that it is impossible for a deaf student to watch the interpreter and write at the same time. When giving in-class written assignments, please allow enough time for the deaf student to write down the assignment before you begin to speak. When selecting videos, select only those that are closed-captioned. If you are not sure if a video is captioned, contact Media Services (Ext. 4906), or the High Tech Center (Ext. 4823), and they will be able to check for you. If you know the video is captioned, and the captions are not displaying, your projector may not have a decoder. All the video and DVD players on campus have built-in caption decoders; however, video projectors do not automatically have captioning decoders. While you are familiarizing yourself with your classrooms, check to see if your DVD player can display closed captioning. If you have a video projector or experience problems, call Media Services (Ext. 4906) or the High Tech Center (Ext. 4823) for assistance.



STUDENTS WHO ARE BLIND

Students who are blind have no useable vision. They may be able to distinguish light from dark, or are able to perceive some movements of objects. However, they cannot use traditional printed documents, or use computer based materials without adaptation. Moving about in the environment is difficult without the benefit of previous physical orientation, or assistance from other people, or with the use of a guide dog.

Classroom Considerations:

- Academic support for blind students can be complex. Please do not hesitate to contact the AEC staff for consultation and advice.
- It takes up to three months to be able to procure course materials in formats useable by students who are blind. **It is essential that you select textbooks and other course materials well in advance of the start of class and submit**

them to the AEC for conversion.

- Textbooks for blind students are often available in an audio format through a national volunteer agency called Learning Ally or Bookshare.
- If an audio version is not available, an AEC staff member must convert the textbook and other course materials to a readable electronic format using an advanced editing process, and this process is **very time consuming**.
- It is critical that the instructor submit their course materials **in advance** so the AEC can check for accessibility or produce alternate formats that the student can access such as electronic text or Braille. If at all possible, materials should be made available before the start of the semester.
- As you create your course materials, make sure you submit your handouts and PowerPoints to AEC **ahead of time**, so the student can have an accessible version to utilize in class at the same time as every student to ensure equal access.
- It may be necessary for the student to use Braille, a Braille-Note or a laptop equipped with screen reading software to access your course materials in class and to participate in class activities.
- Screen reading software is the assistive computer technology used by blind individuals to access electronic documents, including e-mail and Internet content. The software “reads” the screen display, and translates it into digitized speech so that the student can hear it instead of reading it.
- Ready access to lecture notes is often a problem for blind students. A note taker may be necessary, with transcription of the notes into an audio or electronic format at a later time. Digital recording of lectures is also an option. If the instructor’s lecture notes are posted on a site such as iLearn, the student will be able to access them using “screen reading” computer software.
- All online instructional materials need to be accessible such as: PDFs, PowerPoint presentations, podcasts and videos. Build accessibility in before posting your materials online. Contact the AEC or the TLC for information on how to make your materials accessible.
- Other examples of accommodations for blind students include tactile graphics, talking calculators and refreshable Braille displays.
- Individuals who are blind from birth do not have the same “visual” orientation to the world that sighted people have. They often will have difficulty in understanding verbal descriptions or abstract concepts that depend on visual cues. Don’t assume that a student who is blind will understand terms such as “it has branches like a tree,” or “a snapshot of this process.”
- Clear, concise descriptions of the points being covered are important and will benefit other students as well.
- Be careful to avoid vague references such as, “This part fits



in there like this.” Be specific. Say “90 degrees Celsius” instead of “this temperature.”

- Some blind students use guide dogs. These highly trained animals should pose no problems in the classroom or lab.
- Depending on the nature of the course, it may be necessary for the student to have a sighted volunteer accompany him or her to class.
- Taking the time to get to know the student and his or her needs is important. Speak to the student in a normal volume. Don't feel embarrassed about using words like “see,” “look,” or “blind” with the student.
- Since the student depends upon his or her hearing a great deal, do verbalize everything. Say what you are writing on the board. Describe everything that is important to see. To the extent practical, explain in words, visual aids, or cues. Spell new terminology, difficult or unusual words.
- Encourage the student to politely interrupt when absolutely necessary for a better description from the instructor or to ask questions immediately after class to clear up any confusion the individual might have had about the lecture material or assignment.



STUDENTS WHO HAVE LOW VISION

Students who have low vision generally have enough sight to use traditional print or electronic materials, but it is often necessary to utilize some type of technology to allow them to do so. Depending on the severity of the disability, these students may also rely on speech technology in order to access texts or other reading materials.

Classroom Considerations:

- Decide which text you will use at least **two months** before the semester begins as it takes this long for the student to order textbooks in an audio or electronic format.
- Textbooks for students with low vision are often available in an audio format through a national volunteer agency called Learning Ally or Bookshare.
- If an audio version is not available, an AEC staff member must convert the textbook and other course materials to a readable electronic format for students using an advanced editing process, and this process is **very time consuming**.
- It is critical that the instructor submit their course materials (handouts; PowerPoints) **ahead of time** so the AEC can check for accessibility or produce alternate formats that the

student can utilize such as electronic text or large print in a timely manner. If at all possible, materials should be made available before the start of the semester.

- **Before** you handout your materials to any of your students, please make sure that you have an accessible version ready for your AEC student to ensure equal access.
- It may be necessary for the student to use magnifying aids in class, so that he or she can read handouts or other materials. A laptop computer or tablet equipped with magnification software may also be necessary depending on the nature of the class activities.
- Since note taking is difficult for the student with low vision, he or she will probably need to digitally record lectures. A copy of the instructor's lecture notes posted on iLearn would also be very useful.
- Since the student depends upon his or her hearing a great deal, verbalize significant points. Say what you are writing on the board. Describe everything that is important for students to know. To the extent that it is practical, explain in words, visual aids, or cues. Spell new terminology, difficult and unusual words.
- Be careful to avoid vague references such as saying, “This part fits in there like this.” Be specific. Say “90 degrees Celsius” instead of “this temperature.”
- It may be necessary for you to make large print copies of course materials for the student. Ask the AEC for more information on how to produce large print.
- Call on students who have low vision by name and try to face the student while you are talking.
- Permit your lectures to be recorded, if needed, or offer copies of your lecture notes to students with low vision who may need to read them with a magnifying device or assistive computer technology.
- For laboratory accommodations, talk with the student early in the semester to determine the best strategies.
- Some low vision students may need to have a laboratory assistant. For others, having a little more time and individual orientation can eliminate the need for an assistant.



STUDENTS WITH MOBILITY IMPAIRMENTS



Students with mobility problems often find it difficult getting around the campus and using various college facilities. Students in this group include those who use wheel-



chairs, crutches, canes, walkers or electric scooters. This may also include a student with an impaired gait who expends a lot of energy moving from place to place.

Some students may also have problems with writing or grasping due to partial or full paralysis of their hands following a stroke or spinal cord injury.

Classroom Considerations:

- Taking notes may be difficult for some students with mobility impairments. Allow the student to use a digital recorder or a note taker if necessary.
- If writing or marking tests is laborious due to the student's disability, he or she may request testing accommodations.
- Make sure students with mobility impairments are seated in a fashion that allows them to comfortably do their work in class.
- It may be necessary to find a different location for the classroom or faculty office if it is inaccessible.
- The student who uses a wheelchair may frequently be a few minutes late to class if breaks between classes are short (10 minutes or less).
- Students with mobility impairments can and have worked successfully in lab settings. Accommodations can vary from simply relocating some items to more complex arrangements. The student should always be part of this process.
- In a classroom or lab setting, please remind students to push in their chairs when they leave to keep pathways clear for mobility access.
- The controls for safety and utility equipment in laboratories should be easy to reach and to use.
- Students who use mobility devices may find it awkward to open doors. Please ask the student if he or she will need assistance getting into the classroom.

A learning disability is a persistent neurological condition that affects the manner in which individuals with normal or above average intelligence acquire, manipulate, integrate, store, retrieve, or express information. This condition persists despite conventional instruction in standard classroom situations. According to Title V regulations, which govern California community colleges, adults with learning disabilities, have these common attributes:

- average to above average achievement in one or more instructional areas or in an employment setting
- average to above average intellectual ability
- a severe deficit in one or more areas of cognitive processing
- a severe discrepancy between aptitude and achievement.

The University of Wisconsin compares a learning disability to interference on the radio or a fuzzy TV picture; incoming or outgoing information may become scrambled as it travels between the eye, ear, or skin and the brain.

Deficits among adults with learning disabilities commonly occur in one or more of the following areas:

- Reading comprehension
- Spelling
- Written expression
- Math computation
- Problem solving.

These deficits are often compounded by problems with attention, concentration, organization and social misperception. A learning disability is often inconsistent. It may cause problems on Monday but not on Wednesday. It may be evident throughout grade school, seem to disappear in high school, and then resurface in college. It may manifest in one subject area and present no problem in another. Persons with learning disabilities often have to deal not only with functional limitations, but also with the frustrations of having to prove that a condition that is invisible is both real and disabling.

We encourage instructors to keep in mind that the needs of a student with learning disabilities center on information processing. Because information may not reach the brain accurately, the brain often does not do a good job of storing, retrieving or expressing information. Thus, it is important that students with learning disabilities receive and transmit information in a form or modality that works best for them.

College students are evaluated on their ability to effectively absorb and communicate information. The student with a learning disability is held to the same standard but may need appropriate accommodations to achieve the educational outcomes of some courses.



STUDENTS WITH LEARNING DISABILITIES

The term “learning disability” is a general term that is applied to a variety of specific disabilities that are neurologically based. A common misconception among those not familiar with them is that the student with a learning disability is a “slow learner” or has an intellectual disability. Neither of these assumptions is correct.



Students with learning disabilities will need assistance and support from the AEC in finding innovative ways of receiving and transmitting information and in being evaluated. The student's capacity for learning is intact. It is only the means by which information is processed and expressed that is different. Accommodations do not give students with learning disabilities an advantage—they simply level the playing field. Accommodations allow students with learning disabilities to show what they know.

Common Characteristics of Students with Learning Disabilities:

Reading Skills

- Slow reading rate and/or difficulty in modifying reading rate in accordance with material difficulty.
- Difficulty with comprehension and retention of material that is read, but not necessarily with material presented orally.
- Difficulty identifying important points and themes.
- Poor mastery of phonics, confusion of similar words, difficulty integrating new vocabulary.
- Skipping words or lines or reading the same line twice.

Written Language Skills

- Difficulty with sentence structure, (e.g., incomplete sentences, run-ons, poor use of grammar, missing inflectional endings).
- Frequent spelling errors, inconsistent spelling, letter reversals and omissions, especially in specialized and foreign vocabulary.
- Inability to copy correctly from a book or the blackboard.
- Slowness in writing. Difficulty getting thoughts from the brain to paper.
- Poor penmanship (e.g., poorly formed letters, incorrect use of capitalization, trouble with spacing, overly large hand writing).

Mathematical Skills

- Incomplete mastery of basic facts (e.g., mathematical tables).
- Reversal of numbers (e.g., 123 to 321 or 231).
- Confusion of operational symbols, especially + and x.
- Difficulty copying items correctly from one line to another or accurately aligning numbers.
- Difficulty in recalling the sequence of operational processes.
- Difficulty understanding and retaining abstract concepts.
- Difficulty in comprehending word problems.
- Forgetting procedures in the middle of a problem.

Organizational and Study Skills

- Difficulty planning and managing time. (e.g. missed appointments, late assignments, late for class).
- Poor organization of notes, notebook and other materials.
- Slowness in starting and completing tasks. Repeated inability, on a day-to-day basis, to recall what has been taught.
- Difficulty in following oral and/or written directions.
- Lack of overall organization in written notes and compositions. Short attention span.

Social Skills

Some adults with learning disabilities may have problems with social interaction as a result of deficits in perceptual abilities.

For example:

- Auditory perception problems may result in difficulty distinguishing the difference between sincere and sarcastic comments or being able to recognize other subtle changes in tone of voice.
- Visual perceptual problems may result in difficulty interpreting nonverbal messages such as facial expressions or gestures. This may result in lowered self-esteem, which may cause those with learning disabilities to have trouble relating to people, working cooperatively with others, and making friends.

Common Accommodations for Students with Learning Disabilities:

The Accessible Education Center provides a wide range of resources and services to meet the needs of students with learning disabilities. No single student is likely to require the full range of services we provide, and many students use services intermittently, depending on the academic demands of a particular schedule. The following list of services is not exhaustive; however, it describes the services most commonly used by students with learning disabilities at our college.

- Textbooks in an alternate format.
- Extended time on tests.
- Use of a digital recorder for lecture classes.
- Utilizing a classmate's lecture notes or having access to the instructor's notes.
- Waivers for spelling errors on in-class writing.
- Priority registration.
- Access to assistive computer technology.
- Access to individualized or group instruction in study skills and learning strategies.
- Assistance with time management.
- Specialized advising and counseling.



Ways Instructional Faculty Can Help

- Make the syllabus available three or four weeks before the beginning of the class and whenever possible. Be available to discuss the course requirements with students with learning disabilities considering the course.
- Provide an outline (e.g., in a handout, on an overhead projector, or on a website) so students will be able to clearly see the structure of the lesson and know what to expect.
- Emphasize key concepts by slowing down, using vocal emphasis, and repeating them when they are introduced.
- Use the chalkboard to highlight key concepts; be mindful of legibility.
- Use a variety of media in presenting lessons. Consider hands-on objects whenever possible, as well as charts, video, audio clips, handouts of key concepts, etc.
- Demonstrate whenever possible.
- Pause and ask questions throughout, rather than just at the end.
- Call on students at random.
- Give students ample time to ask clarifying questions.
- Give concrete examples of key concepts.
- Color code like ideas and materials.
- Provide the opportunity for participation: questions, discussion and collaborative learning.
- Give early and frequent feedback (e.g. weekly quizzes).
- Check frequently for understanding; don't assume a nod and a smile mean the student gets it.
- Give assignments in writing as well as orally and be available for further clarification.
- When a task involves several skills, present one skill at a time.
- Use mnemonic devices to support memorization.
- Encourage association (connecting new concepts with familiar information) and visualization (creating mental pictures.)

Modification of evaluation procedures:

- Allow oral presentations as an alternative or supplement to written work.
- Vary exam formats between essay and objective.
- Provide clarification and rephrasing of questions before and during exams.
- Give credit for process as well as final solution in math grading.
- Allow the use of multiplication charts, simple calculators, spell checkers or limited notes during exams.
- Provide adequate scratch paper and lined paper to aid those with poor handwriting.
- Whenever possible, provide multiple methods of demonstrating mastery of learning outcomes.



THE STUDENT WITH A READING DISABILITY (DYSLEXIA)

Reading disabilities are a variety of conditions resulting from language processing disorders. They are characterized by difficulty with word recognition, reading comprehension, spelling, and/or memory for written language.

Classroom Considerations:

- Provide a detailed syllabus.
- Choose textbooks carefully.
- Assign advance readings.
- Provide handouts.
- Develop a positive student-teacher relationship.
- Use a multi-sensory approach.
- Use role-playing techniques.
- Provide repetition.
- Ask questions.
- Provide opportunities for previewing and reviewing.
- Personalize information.
- Teach memory strategies (mnemonics).
- Provide lecture outlines.
- Encourage small group discussions.
- Teach initial concepts deductively.
- Use concrete presentations.
- Use the chalkboard or PowerPoint.
- Teach definitions and terms carefully.



THE STUDENT WITH A MATH DISABILITY (DYSCALCULIA)

This learning disability varies in severity and can cause numbers not to add up. While a dyslexic may misread “dog” as “god,” a person with dyscalculia may see “1, 2, 3, 4” as “1, 3, 4, 2” or they may read the math problem $6x(x+3)$ as $6(x+3)$. Dyscalculia is described as a mathematics learning disorder by which a person with the disability processes numbers differently. The severity varies greatly from mild to so severe that a person cannot estimate or compare the length of two objects side-by-side. A student may not understand why $10+5=15$ and may have difficulty memorizing numbers.



Students with math disabilities may have no logical pattern in terms of their mistakes. Symptoms can include difficulty putting numbers in sequence. Math disabilities vary in their impact on a student's ability to handle mathematics. A person with a math disability may exhibit some of these symptoms:

- Trouble reading schedules, telling time, remembering dates or the sequence of events.
- Problems with financial matters: balancing a checkbook, keeping track of credit cards, estimating change, and projecting expenditures and income.
- Difficulty sequencing numbers, performing basic operations or understanding math concepts such as formulas.
- Problems understanding the larger picture and visualizing images such as geographical locations of countries and states.
- Understanding of advanced math concepts, but difficulty with rote memorization of math facts.

Students with math disabilities may be average or very good in verbal, reading and writing ability. They may excel in arts and sciences that do not involve high mathematics skills.

Classroom Considerations:

- Give concrete examples and compare them to real-life situations.
- Encourage use of the AEC Learning Skills Lab and Math Support classes.
- Allow the student to ask questions for clarification during exams.
- Consider some auxiliary aids such as talking calculators for classes and tests. Encourage the student to meet with you during office hours.
- Encourage study groups.
- Allow limited notes or access to formulas to compensate for memory deficits.



THE STUDENT WITH A WRITING DISABILITY (DYSGRAPHIA)

Learning disabilities in writing can involve the physical act of writing or the mental activity of comprehending and synthesizing information. Basic writing disorder refers to physical difficulty forming words and letters. Expressive writing disability indicates a struggle to organize thoughts on paper.

Symptoms of a written language learning disability revolve around the act of writing. They include problems with:

- neatness and consistency of writing
- accurately copying letters and words
- spelling consistency
- writing organization and coherence.

Classroom Considerations:

- Allow the use of a computer and/or word processing program.
- Use oral exams and allow students to dictate assignments to a scribe or utilize assistive computer technologies.
- Avoid negative criticism for sloppiness or illegibility.
- Provide additional time for writing tasks.
- Allow students to use a line width that is most comfortable for them for in class writing.
- Encourage the use of visual organizers to assist in outlining and brainstorming for extended writing assignments.
- Assign writing assignments in advance.
- Provide detailed and structured handouts.
- Provide opportunities for previewing and reviewing.
- Have students complete writing activities in small steps.
- Allow alternatives to written assignments in order for the student to express his or her thoughts.



THE STUDENT WITH ATTENTION DEFICIT/ HYPERACTIVITY DISORDER (ADHD)

Attention-Deficit Hyperactivity Disorder (ADHD) is a condition, which can make it hard for a person to concentrate, focus, pay attention, or control behavior. People with ADHD often are inattentive, impulsive, and hyperactive. These behaviors may be separate or combined.

Although researchers do not know just what causes ADHD, one leading theory is that people with ADHD do not have enough of certain chemicals in their brain. These chemicals, called neurotransmitters, help the brain control behavior and maintain the focus that is needed for productive learning or social activities.

There are three subtypes of ADHD according to the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-V-TR).



They are:

- ADHD Predominantly Inattentive Type
- ADHD Predominantly Hyperactive-Impulsive Type
- ADHD Predominantly Combined Type.

The lack of obvious physical signs makes ADHD difficult to identify. It usually develops at an early age, and often continues into adulthood. However, it is not unusual for the syndrome to go undiagnosed until adulthood. Since academic success often means being able to pay attention and control behavior and impulses, school can be difficult for students with ADHD at any age.

The following tendencies may be observed in students affected by ADHD:

- Variability in performance, with good days and bad days.
- Inability to keep focused on tasks over a long period of time.
- A tendency to get bored, particularly during lectures.
- Difficulty with change
- Impulsivity
- Social problems
- Mood swings
- Auditory/visual distractibility
- Problems with time management and organization
- Inability to sit still, fidgeting, tapping toes and drumming fingers.
- Oppositional behavior.

Classroom Considerations:

- Ask the student what will help. A student will often have the best suggestions for what will help them be successful.
- Remember that the ADHD student needs structure.
- Make lists, handouts or outlines.
- Give frequent reminders.
- Use repetition. A student with ADHD needs to hear things more than once.
- Give written and verbal directions.
- Make frequent eye contact to keep the student engaged.
- Give frequent feedback and encouragement.
- Arrange for the student to have a “study buddy” in the class.
- Allow the student to digitally record lectures.
- Provide handouts, visual aids and hands-on activities in class.
- When appropriate, team a reader with a non-reading student during in-class assignments.
- Use more than one way to demonstrate or explain information.
- Break information into small steps. For example, state objectives, review previous lesson, summarize periodically.

- Allow time for clarification of directions and essential information.
- Provide study guides or review sheets for exams.
- Allow the use of spell check and grammar-adaptive devices.

References

Northwestern University Services for Students with Disabilities

<http://www.northwestern.edu/accessiblenu/faculty/resources/ld-adhd/index.html>



STUDENTS WITH TRAUMATIC BRAIN INJURY (TBI)

The effects of head injuries vary widely depending on the location of the brain that is injured and its severity. Students with head injuries often experience difficulty with the comprehension and use of language. These students may have some difficulty with producing and/or understanding speech. There may often be difficulty in reading or writing or using numbers. Students with acquired brain injury may also have severe headaches or they may be subject to tremors or mild seizures. Short-term memory and organizational skills are often adversely affected. Some have trouble with their vision. If the motor areas of the brain are damaged, walking or manipulating objects with the hands may be affected.

Because of the injury, the individual often has less control over his or her feelings than before his or her illness. Occasional irritability or a susceptibility to tears is often seen. Recovery from traumatic brain injury is often a long-term process, sometimes taking years.

Classroom Considerations:

- Locate the student near the front of the classroom if possible.
- Reinforce your lectures or discussions by putting major topics or even outlines of the material on the board.
- Write assignments on the board. Allow the use of a digital recorder, assist in identifying a peer note taker, or provide electronic access to lecture notes.
- Encourage the student to ask questions after class to ensure that the individual understood the materials covered.



- Extended time on tests may be necessary, in an environment with few distractions.
- Encourage the student to participate in class discussions. If the individual has difficulty in enunciating a word or a thought, help the student to rephrase.
- For additional suggestions, please refer to the section on learning disabilities: “Ways Instructional Faculty Can Help”.



THE STUDENT WITH PSYCHOLOGICAL DISABILITIES

“Mental illness” refers to the collection of all diagnosable mental disorders causing severe disturbances in thinking, feeling, relating and functional behaviors. It can result in a substantially diminished capacity to cope with daily life demands. A mental illness is a hidden disability; it is rarely apparent to others. However, students with mental illness may experience symptoms that interfere with their educational goals and that create a “psychiatric disability.” Examples of psychiatric diagnoses include: major depression, bipolar disorder, schizophrenia, and anxiety disorders (Souma, Rickerson & Burgstahler, 2006).

People with serious psychological disabilities have some structural and biochemical characteristics in their brains that are different from those of people who are not mentally ill. Psychological disabilities are usually, although not always, a chronic disease. It is important for those around this person to realize that this type of disability is biological and not “a matter of choice.” While no cure has yet been found, the symptoms can often be controlled with medication and other treatment methods. Psychological disabilities are moderated through medications much like someone with a disease like multiple sclerosis or diabetes.

Medication, along with other mental health interventions, can reduce symptoms and enable many people with psychological disabilities to successfully pursue an education. Standards of behavior for all students with disabilities, including psychological disabilities, are no different from those of other students.

Functional Limitations

The following functional limitations related to psychiatric disabilities may affect academic performance and may require accommodations (Center for Psychiatric Rehabilitation, 1997):

- The side effects of psychiatric medications may affect academic performance, including drowsiness, fatigue, dry mouth and thirst, blurred vision, hand tremors, slowed response time, and difficulty initiating interpersonal contact.
- There may be a reduced ability to block out sounds, sights, or odors that interfere with focusing on tasks. There may also be a limited ability to tolerate noise and crowds.
- Some students experience restlessness, shortened attention span, distraction, and difficulty understanding or remembering verbal directions.
- Sustaining enough energy to maintain a full-time schedule may be difficult; there may be drowsiness due to medications.
- Handling time pressures, managing multiple assignments, and prioritizing tasks are often a challenge.
- Getting along, fitting in, contributing to group work, and reading social cues are sometimes difficult for these students.
- There may be a fear of authority figures, including difficulty approaching instructors.
- Responding to negative feedback and difficulty understanding and correctly interpreting criticism or poor grades is often observed. The student may not be able to separate person from task (personalization or defensiveness due to low self-esteem).
- There could be a difficulty coping with unexpected changes in coursework, such as changes in the assignments, due dates or instructors.
- There may be limited ability to tolerate interruptions.
- Severe test anxiety can occur, such that the individual is rendered emotionally and physically unable to take the exam.

The following are typical classroom, exam, and assignment accommodations that may be recommended by the disability student service professional for a student with a psychiatric disability (Souma, Rickerson & Burgstahler, 2006).

Classroom Accommodations:

- Allow preferential seating, especially near the door to allow leaving class for breaks. Some students with psychological disabilities will specifically request to sit in the back due to a preference not to have people behind them.
- Beverages may be needed in class, as dry mouth due to medication side effects is common.
- Prearranged or frequent breaks.
- Allow recording of lectures.
- In some cases, a note taker or copies of another's notes may be necessary.



- Availability of course materials (lectures, handouts) in electronic format.
- The student may need private feedback on academic performance.
- Consider giving exams in alternate format (e.g., from multiple choice to essay, oral, presentation, role-play, or portfolio).
- Testing accommodations may be necessary.
- Increased frequency of exams or breaking the exam into sections administered one at a time.
- Substitute assignments in specific circumstances. Written assignments in lieu of oral presentations or vice versa.
- Extended time may be necessary to complete assignments, especially specific circumstances related to hospitalization or medication changes.

References

Center for Psychiatric Rehabilitation (1997). *How does mental illness affect the way I function at school?* Boston University. Retrieved February 29, 2008 from <https://cpr.bu.edu>

Souma, A., Rickerson, N., & Burgstahler, S. (2006). *Academic Accommodations for Students with Psychiatric Disabilities*. Retrieved February 29, 2008 from <http://www.washington.edu/doi/academic-accommodations-students-psychiatric-disabilities>



STUDENTS WITH ASPERGER'S SYNDROME

Asperger's Disorder, also referred to as Asperger Syndrome, is a neurological disorder characterized by difficulty with social interactions, preference for sameness and routine, and narrowly focused interests or repetitive behaviors. Individuals with Asperger's Disorder have average or above-average intelligence and normal language development. Although they often have exceptionally rich vocabularies, individuals with Asperger's Disorder may have an overly literal understanding of language, and their speech patterns may be unusual. People with Asperger's Disorder also have difficulty interpreting nonverbal communication such as gestures and facial expressions.

Many individuals with Asperger's Disorder have a strong preoccupation with a particular subject matter and may exhibit considerable knowledge, skill, and/or talent in a specific area. Some individuals may have a heightened sensitivity to sounds, odors, or other sensory input. Asperger's Disorder is considered to be one of the Autistic Spectrum Disorders (<http://www.washington.edu/doi/Faculty/articles?246>).

A distinction between Asperger's Disorder and Autism concerns cognitive ability. While some individuals with Autism experience mental retardation, by definition a person with Asperger's Disorder cannot possess a “clinically significant” cognitive delay and most possess an average to above average intelligence (<http://www.autism-society.org>).

Functional Limitations

- Intense sensory stimulation - easily bothered by noisy or disordered environments.
- Difficulty understanding and interpreting social cues and nonverbal communication.
- Lack of empathy.
- Limited or no eye contact.
- Difficulty with change or being flexible in routine.
- Difficulty understanding irony or subtleties of language.
- Often have obsessive routines and may be preoccupied with a particular subject of interest.

Accommodations:

- Provide clear and established routines whenever possible.
- Announce when changes to the routine are going to occur.
- Give written instructions, rather than auditory, whenever possible.
- Provide a quiet area for student, if needed. Or allow the student to leave class if a break is needed.
- Provide a note taker.
- Permit the use of earplugs, especially when situations are noisy or in a testing situation.
- Practice communication strategies.
- Provide testing accommodations.



APPENDICES

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UNIVERSAL DESIGN IN LEARNING (UDL)

Universal Design for Learning (UDL) is an approach to designing course instruction, materials, and content to benefit students with different learning styles without adaptation or retrofitting. UDL provides equal access to learning, not simply equal access to information. The premise of UDL is that a curriculum should include alternatives. It should reflect the unique nature of each learner and the need to accommodate differences, creating learning experiences that suit the learner and maximize his or her ability to progress. It should be noted that UDL does not remove academic challenges. It effectively removes barriers to access. Simply stated, UDL is just good teaching. The Accessible Education Center encourages the adoption of these principles in course design.

The beneficiaries of UDL include:

- Students who speak English as a second language.
- International students.
- Older students.
- Students with disabilities.
- Students with different learning styles.
- All students.

Incorporating the principles of UDL

- Present course materials in many different formats with:
 - Multiple means of representation/presentation.
 - Multiple means of engagement/participation.
 - Multiple means of expression.
- Offer flexibility in the conduct and delivery methods of the course.
- Help students become aware of their learning style.
- Create a course that is well designed, organized and consistent.
- Buy, create and provide access to learning materials that are accessible to students with disabilities. For example, use only captioned videos.

Defining Multiple Means

1. Multiple Means of Representation/Presentation:

Universally designed course content provides alternative representations of essential concepts. Various methods of representation can allow the student to learn the information in their preferred means. Example: Placing course notes on the web allows students to gain the information by lecture and text. Additionally, a student with a visual impairment could

digitally record the lecture to capture the notes in alternate format. In an online course, provide lecture material in different formats, such as video, podcast or written lectures.

2. Multiple Means of Engagement/Participation:

Universally designed course content maintains varied skill levels, preferences, and interests by allowing for options. By having flexible teaching strategies and course content, students can choose methods that support their interest and skill levels. Example: When teaching a foreign language, students could choose from a variety of options that would allow them to practice fluency and comprehension at a reading level that is appropriate for them.

3. Multiple Means of Expression:

Universally designed course content allows for alternate methods of expression. This allows the student multiple means of demonstrating mastery of the material. Example: Allow students to demonstrate knowledge of a subject by doing an oral presentation, writing a paper or taking a test. Students with a speech impediment may be unable to present the information orally, while students with a fine motor disability may have difficulty taking a written exam.

The beneficiaries of UDL include:

- Post lecture materials online.
- In an online course, provide lecture materials in different formats, i.e. video lectures, movie clips, podcasts, Power-Point, etc.
- Use peer mentoring, group discussions, and cooperative learning situations rather than strictly lecture.
- Use guided notes to enable students to listen for essential concepts without copying notes off of the board.
- Update course materials based on current events and student demands.
- Provide a comprehensive syllabus with clearly identified course requirements, accommodation statement and due dates.
- Add variety to instructional methods. Provide illustrations, handouts, auditory and visual aids.
- Clarify any feedback or instructions, ask for questions, and repeat or give additional examples.
- Relate a new topic to one already learned or a real-life example.
- Allow a student to digitally record lectures, or provide audio versions (podcasts), or provide him/her with a copy of your notes.
- Allow the student to demonstrate knowledge of the subject through alternate means.
- Permit and encourage the use of assistive computer technology.



- Develop study guides.
- Give more frequent exams that are shorter in length.
- Allow students to design their own learning by giving them a variety of different opportunities to earn points.
- Provide prompt feedback.
- Offer flexibility in the conduct of the course. For example, students could come to lecture or participate online or a little of both.

Resources:

Universal Design. Available: <http://www.cast.org>
Curriculum Transformation and Disability. Funded by the US Department of Education. Project #P333A990015. Ways to Incorporate Universal Instructional Design.

Common Teaching Methods. Available here.
Do-It. University of Washington. Funded by the National Science Foundation, The US Department of Education, and the State of Washington. Grant #9725110. Available: <http://www.washington.edu/doiit/equal-access-universal-design-instruction>.

University of Arkansas at Little Rock. College of Education. Available: <http://ualr.edu/disability/online-education/>

etc. should be thoroughly evaluated for accessibility before being purchased.

Offer flexibility in course conduct and delivery methods

- Give students the opportunity to attend class, take the course online, or do a little of both.
- Accessible Education Center staff may suggest that the student take paper versions of exams, instead of on a computer or vice versa.
- Extended test time may be necessary upon recommendation of the AEC staff.

Create a course that is well designed, well organized, and consistent

- Break the course into consistent small chunks or modules.
- Provide weekly activities that emphasize a variety of learning modalities.
- Discussion forums should be well designed to avoid confusion. Some instructors find breaking the class into small discussion groups is helpful.
- Use neutral language to avoid confusion. Avoid using sarcasm or irony unless tagged as such.

Allow students to communicate with you by email, phone, instant messaging, or whatever mode works best with their learning style. Students should be allowed to express mastery of subject orally, written or in other formats. Consider the following points:

- Follow web accessibility guidelines (Contact the High Tech Center at Ext. 4823 for more information or visit the Gavilan College’s website for Accessible Web Design at (http://www.gavilan.edu/student/aec/web_design.php))
- A student who is blind should be able to access the learning material. The same applies to a student who is deaf or color-blind.
- Can a screen reader access the text? Tip: if you cannot click in the text a screen reader probably won't be able to read it.
- All videos must be captioned.
- Are pictures appropriately alt tagged?
- Is a text equivalent provided for an audio file or podcast?
- If you modify color schemes in iLearn, make sure that you provide adequate contrast.

Other Tips

- Contact the Accessible Education Center (AEC). The AEC can provide useful information about how to accommodate students in a variety of situations and also help you create documents in alternative formats. Try to do this before you have a student in your class who needs accommodations.
- Take advantage of the many distance learning professional development activities on campus.



TIPS TO MAKING DISTANCE LEARNING CONTENT ACCESSIBLE TO STUDENTS WITH DISABILITIES

When designing your distance learning course materials it is particularly important to make sure that your learning materials are accessible to all students including students with disabilities. The following guidelines are a good starting point on the road to making your course accessible to everyone. Please contact the Accessible Education Center for more information.

Provide for multiple means of presentation, participation, and expression (See Universal Design in Learning (UDL)).

- Lectures and other learning materials should be presented in written and audio and/or captioned video formats.
- Choose online materials that are accessible to all students. All online courseware, course cartridges (third party publishers), electronic textbooks, videos, linked materials,



- Make it clear to students that you are open to providing accommodations upon the recommendation of the Accessible Education Center. A simple statement on your syllabus may open the lines of communication and avoid last minute problems.
- Understand the issues faced by students with disabilities. If you understand the issues faced by people who use assistive computer technology to access online courses, it will be easier to plan ahead and design your course to avoid accessibility issues. See Assistive Computer Technology and Adaptive Equipment sections.
- Create course materials with differing learning styles in mind; most of us have a preferred method of learning and demonstrating our knowledge.
- Remember the students: Make sure communication between you and all of your students is clear and easy. If all else fails, pick up the phone.
- Email is still the most widely use method of communication and will most likely be accessible.
- Providing opportunities for students to work together can solve many accessibility problems. For example, a sighted student may be able to describe an image for a student who is blind.
- Provide prompt feedback and encourage contact between faculty and students as well as student and student.



DISTANCE EDUCATION CAPTIONING AND TRANSCRIPTION (DECT) GRANT

The Distance Education Captioning and Transcription grant (DECT) provides California Community Colleges with funding for live and asynchronous captioning and transcription as a means of enhancing the access of all students to distance education courses. Further, the DECT promotes and supports awareness of available funding as a means to support faculty efforts to develop high-quality, media-rich distance learning courses.

The DECT grant is sponsored by the California Chancellor’s Office through the College of the Canyons. See the following DECT website for more information on how to apply for the grant:

<https://www.canyons.edu/Offices/DistanceLearning/Captioning/Pages/default.aspx>

If you are interested in applying for this grant and you need assistance, contact the High Tech Center (Ext. 4823) or the Teaching and Learning Center.



GENERAL INFORMATION REGARDING TESTING ACCOMMODATIONS

Testing accommodations is a frequently recommended accommodation for students with disabilities. This is the process whereby students are allowed to take exams separate from their peers, and usually with extended time. This accommodation may be recommended for a student with chronic pain, or one who has a visual limitation. Others may have a learning disability and process reading material more slowly measured by a test without the interference of their disability. The Accessible Education Center employs test proctors who coordinate testing accommodations and ensure the security of exams.

A student who has been determined eligible for testing accommodations by the Accessible Education Center will discuss this accommodation with you. Below are some general guidelines regarding testing accommodations. In addition, you will find more suggestions for this service as you read the sections on specific disabilities.

- Students who are eligible for testing accommodations will provide you with a “Test Accommodation Request” form. This authorization will indicate the appropriate testing accommodations for the student and will be completed by an AEC staff person. This form will need your signature.
- In a distance learning class, students who are eligible for testing accommodations will inform you via e-mail or at orientation (if offered). An AEC staff person will contact you via e-mail or campus mail to verify the student's eligibility for this accommodation.
- When a student informs you that he or she will be using testing accommodations, you will need to complete the “Test Proctoring Instructor Form”.
- It is important that you indicate on the form how the test will be delivered to the AEC and how it should be returned.
- It is also important that you indicate any additional items the student will be allowed to use, such as time allotment, notes or a dictionary.
- Consult with the student or the AEC if there are questions about testing accommodations.



ASSISTIVE COMPUTER TECHNOLOGY (ACT)








Assistive computer technology (ACT) is any software, hardware or piece of equipment that helps provide equal access to computer resources as well as alternatives to the way in which we interact with our computer and written material. Basically, ACT is anything that helps us get our work done.

The following is a list of the technology available on campus and/or by request.

Products	Description	Who will benefit?
Kurzweil 3000 or Firefly app (Text-to-Speech software) 	The premiere reading, writing, and learning software solution for struggling students. It is widely recognized as the most comprehensive and integrated solution for addressing language and literacy difficulties and accessibility.	Recommended for students that learn better by hearing than reading. Great for students with reading and writing disabilities. Kurzweil 3000 supports students with learning disabilities including dyslexia, dysgraphia, and English Language Learners.
Read & Write Gold (Text-to-Speech software) 	A customizable toolbar that integrates reading, writing, studying, and common applications.	Recommended for students who struggle with reading and writing, learning disabilities, or learning English.
Dragon Naturally Speaking (Speech-to-Text software) 	Dragon Naturally Speaking is speech recognition software that enables the user to enter text, control menus, and execute commands simply by speaking into a microphone.	Recommended for students with moderate to severe physical disabilities, poor typists, and poor spellers.
JAWS® 	JAWS® is a fully functioning screen reader for individuals who are blind.	Recommended for students who are blind or who have low vision.
ZoomText or MAGic® 	Zoomtext and MAGic® are advanced screen magnification and screen reading programs for individuals who have low vision.	Recommended for students who need help seeing what is on the monitor.
Inspiration® 	Inspiration® is the essential tool students rely on to plan, research and complete projects successfully. With the integrated Diagram and Outline Views, they create graphic organizers and expand topics into writing.	Recommended for visual learners.
Duxbury Braille Translator 	Translates text to Braille.	Recommended for students who are blind and read Braille.

SPECIALIZED ADAPTIVE EQUIPMENT

Specialized adaptive equipment is any hardware or piece of equipment that helps provide equal access to classroom lectures and written materials.

Products	Description	Who will benefit?
Phonic Ear® 	A portable FM assistive listening device.	Recommended for students who are hard-of-hearing.
CCTVs (Video print enlargers) 	A Closed Circuit Television (CCTV) is a video magnification system consisting of a video screen interfaced with a video camera.	Recommended for students with low vision.
Franklin Dictionary & Thesaurus 	A hand-held dictionary and thesaurus.	Recommended for poor spellers.
Various Recording Devices 	Useful for recording lectures.	Recommended for students who are auditory learners and/or have difficulty taking notes.
PulsePen or SmartPen 	These pens let a student capture words, diagrams, scribbles, symbols and audio by syncing everything they hear to what they write.	Recommended for students who have learning disabilities and for those students who qualify for note-taking accommodations.
Talking and Magnified Calculators 	A talking calculator has a built-in speech synthesizer that reads aloud each number, symbol, or operation key a user presses; it also vocalizes the answer to the problem.	Recommended for students who are blind or have low vision. Students with learning disabilities may benefit.
Various Daisy Players 	Portable audio playback device and digital recorder. These players support the playback of DAISY digital talking books (DTB).	Recommended for students who are blind or students who have low vision. Digital talking books can also benefit students with learning disabilities such as dyslexia.



Ability Reimagined



Accessible Education Center (AEC)
Faculty & Staff Guide

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