

# How-to Guide to Teaching Students with Disabilities

UNIVERSITY *of*  
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## Introduction

Students with disabilities can and do succeed in the classroom and meet the same course requirements and performance standards as all other students when allowed to use learning strategies and accommodations that compensate for their specific functional limitations. Students with disabilities should be expected to perform at a level commensurate with their peers; instructors should not expect less from them. By implementing effective teaching strategies, faculty can reach more students regardless of learning style, disability or experience.

This page is a resource for faculty and staff. The content is aimed at aiding in the understanding of various disabilities and their potential impact on students. It is important to recognize that the impact of a disability will vary from one student to another. The content here is general in nature. If you have a student who is struggling, regardless of a reference to a disability, please refer the student to the Office of Learning Resources (OLR). Diagnosis of a disability can only be addressed by qualified persons.

## Asperger's Syndrome

Asperger's Syndrome is one of five disorders encompassed in an overarching diagnostic area, Pervasive Developmental Disorder (PDD) often considered a high functioning form of autism. An increasing number of individuals diagnosed with Asperger's Syndrome are entering institutions of higher education. Asperger Syndrome is a complex disability marked by impairments in socialization, communication, cognition, and sensation. It is a neurological disorder that affects a person's ability to communicate and relate to others. It is a lifelong disorder. Characteristics of Asperger Syndrome will differ from person to person; however, some characteristics are highlighted below:

### Characteristics

- Many of the Characteristics in Asperger Syndrome are very similar to the characteristics in Autism. The main characteristics can differ greatly and some may be demonstrated more strongly than others due to everyone being different.
- Many people with Asperger Syndrome try very hard to be sociable and enjoy human contact. However they do find it hard to understand the non-verbal signals like facial expressions.
- Students with Asperger Syndrome may sometimes speak very fluently but they may not take much notice of the reaction of people listening to them. They may talk on and on regardless if the person they're talking to is not interested. They can be extremely precise or literal.
- While individuals with Asperger's often excel at learning facts and figures they can find it hard to think in abstract ways. This can cause problems in school where they may have difficulty with certain subjects such as literature or religious studies.
- People with Asperger's often develop an almost obsessive interest in a hobby or collection. Usually their interest involves arranging or memorizing facts about certain subjects. Interests can be developed into educational or vocational opportunities in their favorite subjects.
- For people with Asperger's any unexpected change in a routine can be upsetting. Some students may impose their new routine, such as insisting on always going the same way to class. They may have difficulty with sudden changes. People with Asperger's often prefer to order their day according to a set pattern. If they have set hours and there is any delay, such as a traffic hold up or any general lateness this can cause them to be anxious or upset.

[Download an Educator's Guide to Asperger Syndrome >>](#)

[Watch the Professor's Guide to Understanding Aspergers Syndrome \(Video\) created by the Organization for Autism Research >>](#)

## Attention Deficit Disorder / Attention Deficit Hyperactivity Disorder

Attention Deficit Disorder / Attention Deficit Hyperactivity Disorder is a neurological condition that affects both learning and behavior. ADD is the result of a chronic disturbance in the areas of the brain that regulate attention, impulse control and the executive functions which control cognitive tasks, motor activity and social interactions. Hyperactivity may or may not be present. The diagnosis of ADD is always a medical one, and must rule out causation from other disorders of a neurological or psychological nature which might explain the individual's behavior.

### Characteristics

The essential feature of Attention Deficit Disorder (ADD) is a persistent pattern of inattention and/or hyperactivity that is more frequent and severe than is typically observed in individuals at a comparable level of development. Students who are diagnosed with ADD frequently exhibit many characteristics that make learning difficult. Those who have attention problems are easily distracted by extraneous stimuli, such as buzzing fluorescent lights in the classroom; have difficulty sustaining attention during lectures or conversation; have difficulty persisting in sedentary activities like studying; are frequently disorganized; often lose things; and have difficulty completing tasks. Those who are hyperactive, in addition to having attention problems, may have persistent body movements, have difficulty remaining seated, have difficulty pursuing quiet activities, may blurt out answers to questions before the questions have been completed, and may persist in speaking when doing so is inappropriate. Frequently, the effects of the characteristics of ADD impact not only student's academic performance, but their socialization in the workplace and at home as well.

Some students who have ADD take medication that helps her or him focus on tasks better. The goal of taking the medication is to increase the attention span while decreasing distractibility and impulsiveness.

As with any other type of disability, there is considerable variability among students diagnosed as having ADD. The following is a list of suggestions that may be helpful when teaching these students, but keep in mind that they will not be helpful to all students with ADD due to the uniqueness of each individual's experience.

### Teaching Strategies

#### Lecture Classes

- Provide access to another student's notes to verify accuracy and completeness of own notes.
- Allow seating close to the speaker.
- Use multi-modal lecture style.
- Students with ADD perform better if given a syllabus with clearly delineated expectations and due dates.
- Break long assignments into smaller parts and provide feedback between parts.
- Frequent opportunities for feedback are another way to provide students with needed structure.
- If a class meets for the equivalent of two periods, a break may be necessary after 45 minutes.
- Remind students to check their work, especially if it appears rushed or sloppy.

#### Written Papers

- Encourage regular meetings with professor to clarify assignments and check progress.
- Allow extra time to complete writing assignments.
- Provide assistance in organization of papers.

#### Examinations

- Provide a test environment with minimal distractions
- Permit earplugs
- Provide extended time to complete exams
- Avoid scantron sheets for multiple choice tests

## Concussions

Concussions are serious brain injuries that have a significant influence on the brain's ability to function at its normal capacity. Most concussions resolve within a few days or weeks, so the management of a concussed student may be no different than that of one who missed a few days due to minor illness. However, some concussion symptoms linger and have the potential to cause long-term academic and social difficulties for the student.

### Characteristics

The symptoms below can have a significant impact on learning. Physical symptoms may interfere with the student's ability to focus and concentrate, while cognitive symptoms may impact the ability of the student to learn, memorize and process information, as well as keep track of assignments and tests. Struggles with school work may worsen the frustration, nervousness and/or irritability that were originally caused by changes in brain chemistry. Lastly, disturbances in sleep patterns often result in fatigue and drowsiness during the day, factors which may compound all the other problems the student may experience.

#### Physical

- Headache
- Dizziness
- Balance problems
- Nausea/Vomiting
- Fatigue
- Sensitivity to light
- Sensitivity to noise

#### Cognitive

- Feeling mentally foggy
- Feeling slowed down
- Difficulty concentrating
- Difficulty remembering
- Difficulty focusing

#### Emotional

- Irritability
- Sadness
- Nervousness
- More emotional than usual

#### Sleep

- Trouble falling asleep
- Sleeping more than usual
- Sleeping less than usual

### Teaching Strategies

Students need to work with their treating physician, faculty members and OLR to determine what types of accommodations or suggestions are appropriate in the post-secondary environment.

## Deaf or Hard of Hearing

Students who are deaf or hard of hearing may use a wide range of services depending on the language or communication system they use. People who are deaf are members of a distinct linguistic and cultural minority. The majority members of this cultural group use American Sign Language, a fully developed language with its own structure and rules, as their first language. Therefore, members of this cultural group are bilingual and English is their second language. Many of the students who are deaf do not perceive themselves as having a disability. As with any cultural group, people who are deaf have their own values, social norms, and traditions. Because of this, be sensitive and attentive to cross-cultural information in the mainstreamed classroom setting. Students who are deaf may use American Sign Language interpreters in the classroom setting. Hard of hearing refers to those individuals who may use speech, lip reading and hearing aids to enhance oral communication. Hearing aids or amplification systems may include public address systems and transmitter/receiver systems with a clip-on microphone for the instructor. For those who use lip reading, only 30-40% of spoken English is comprehensible even for those who are highly skilled.

For people who are deaf or hard of hearing who choose to speak, feedback mechanisms are limited; therefore, vocal control, volume, and articulation may be affected. These secondary effects are physical and should not be viewed as mental or intellectual weaknesses. Indications that a student has a hearing loss may include a student's straining to hear, use of loud or distorted speech, and consistent failure to respond. There are a variety of services available to students who are hard of hearing. Students may use Signed English, cued speech, or oral translators in the classroom. These are visual systems that enhance the reception and expression of spoken English. Students may wear hearing aids, which amplify all sounds and will vary widely in their listening and oral communication skills.

## Understanding the Jargon

There are specialized terms related to the field of deafness. A few expressions used frequently, which are often misunderstood or misused, include:

**Hearing-Impaired:** The general term used to describe any impairment in the ability to perceive sound. It may include ringing in the ears, difficulty discriminating sound, partial hearing loss, or total deafness.

**Hard-of-Hearing:** A condition where the sense of hearing is impaired but functional for ordinary life purposes (usually with the help of a hearing aid).

**Deaf/Deafness:** A condition in which perceivable sounds (including speech) have no meaning for ordinary life purposes.

The type of hearing impairment does not always correspond with the individual's functional use of hearing or their ability to communicate. This is comparable to the individual skill and ability differences within every person. Therefore, not all suggestions for accommodations will be relevant for every person with a hearing impairment.

## Teaching Strategies

- Encourage the student to select a seat that is near a blackboard or overhead screen and far removed from auditory disturbances.
- The seating arrangement should permit the student to face the instructor and other students.
- The instructor should not speak with anything in his/her mouth and should keep their hands away from their faces while speaking.
- The instructor should position himself with light behind the listener.

- The instructor should be three to four feet away from the student and speak moderately.
- Avoid exaggerated lip movements.
- Be aware that the academic problems of many students are related to their language impairment, not a lack of intelligence.
- Use an overhead projector; it permits an instructor to write material that can be seen by students while the instructor continues to face the class.
- Provide copies of notes when material is presented in lecture format. It is not possible for the student to speech read and take notes simultaneously.
- Write assignments and outlines of lectures on the board.
- Use captioned films whenever possible.
- Question students to determine whether they can understand information presented in class; do not assume that students understand the material
- Use visual examples when explaining concepts; keep terminology consistent.
- Speak in complete sentences.
- Be aware that speech reading is a tiring task.
- If you have difficulty understanding the student, ask him/her to repeat what was said.
- Do not call attention to the student's speech errors in the classroom.
- Encourage the student to tape each lecture, if appropriate.
- Talk at a slower rate-pause between sentences.
- Face the student whenever possible.
- Spelling is based on auditory information. Students with hearing impairments may not sound out or recognize unfamiliar words. It would be helpful to correct the spelling.
- Encourage the student to rewrite his/her lecture notes and write out sample test question answers while studying.
- Reinforce oral directions with written ones or with other visual clues.
- Avoid using an all-lecture format.
- Ask concept questions rather than drill questions.
- Arrange rote materials in logical order.
- Communicate in writing information about assignment scheduling, deadlines, etc.
- Do not use tape recorders, records, etc. as primary instructional media.
- If you are going to be showing slides or movies, it would greatly help the hearing impaired student if you could provide an outline or summary of the materials to be covered. She/he is going to be at a disadvantage in trying to process information from such presentations.
- When questions are asked from the class, it would be of great help to the student if you would repeat the questions before answering. If you have given her/him preferential seating so you can be seen and heard easily, the student will not be able to see and hear the rest of the class as well.
- Beware of giving procedural information while handing out papers, etc. Make sure such information is clearly understood by the student.
- If you or a student is reading aloud from the test, arrange a study buddy for the hearing impaired student; the hearing student sitting beside her/him could point at what is being read, and then indicate to the student when you are making comments, thus letting her/him know when to look at the interpreter.
- During class discussions, encourage students to respond one at a time.

## **Accommodations for Hearing Impairments**

Accommodations for students who are deaf or hard of hearing vary and are determined based on individual need. Commonly, students who are deaf or hard-of-hearing may use a variety of accommodations such as CART, sign language interpreters, oral interpreters, assistive listening devices, note takers, etc.

### **CART or Real-Time Captioning**

A service that provides an in-class stenographer who types the course lecture “real-time” for the student and it appears on a laptop computer screen as it is being typed. The student is then provided with an electronic or print copy of the transcript.

### **Interpreters**

The sign language interpreter is a paid professional hired by the college to facilitate communication between the hearing impaired student, the instructor, and the hearing class members.

Interpreters don't do add or delete information, take notes or pass out papers, advise people on the subject of deafness, attend class when student is absent or work with the student as a tutor.

## Learning Disabilities (LD)

Learning Disabilities (LD) is a generic term that refers to a group of disorders which are manifested by significant difficulties in at least one of the following areas: oral expression, listening comprehension, written expression, basic reading skills, reading comprehension, mathematical calculation, or problem solving. These disorders are intrinsic to the individual, presumed to be due to central nervous system dysfunction, and may occur across the life span. People who have learning disabilities may also have some difficulty with sustained attention, time management, or social skills, but these, by themselves, do not constitute a learning disability.

Students with LD have average or above-average intelligence, but are hampered in their demonstration of their capabilities such that there is often a marked discrepancy between achievement and potential in individuals with LD. The effects of learning disabilities on students' academic life are different for different people, even if they have the same type of learning disability. Each individual's experience will be unique, and the severity of his or her learning disability will vary. As a result, students may not realize that they have a learning disability until they are placed in a situation where their coping strategies are no longer effective.

### Characteristics

Awareness of some of the characteristics of individuals with LD, therefore, serves two functions for instructors. First, your knowledge about learning disabilities may help you to better understand the needs of your students and make you more sensitive to areas in which they may have difficulty. For instance, although many students with LD are highly articulate, some have severe difficulty in speaking, responding, or reading in front of groups. Thus, it would be beneficial to students if you are aware of this issue and are able to assess their ability to participate in classroom activities. Your knowledge will make you more prepared to accommodate your students with LD and to discuss privately with them any academic difficulties that they may face.

Secondly, your knowledge of the attributes of individuals with LD will provide a bases for referral of undiagnosed students taking your classes who demonstrate these characteristics for testing. It is important to keep in mind, however, that while many students may experience difficulties in some of these following categories at one time or another, students with LD will often have difficulties in several of these areas with varying degrees of severity. In fact, students who have a learning disability are characterized by a pattern of strengths and weaknesses. Thus, individuals may be strong in some areas and significantly weak in others.

### Reading Comprehension

- Inadequate word attack skills; confusion of similar words; little or no phonics skills
- Slow reading rate and/or difficulty in modifying reading rate in accordance with material difficulty
- Problems understanding what is read; difficulty identifying main ideas and details
- Difficulty integrating new vocabulary

### Written Language

- Poor penmanship
- Slow written production
- Difficulty with sentence structure or poor grammar
- Difficulty copying from board or a book
- Difficulty learning rules of grammar
- Compositions lacking in organization and development of ideas
- Frequent spelling errors
- Poor proofreading and revising skills

## **Mathematics**

- Incomplete mastery of basic facts
- Difficulty recalling sequence of math operations and processes
- Misunderstanding of math vocabulary
- Confusion or reversal of numbers and operational symbols
- Difficulty reading or understanding word problems
- Inaccurate copying of problems
- Problems with time, money & measurement

## **Receptive & Expressive Oral Language**

- Difficulty expressing ideas or thoughts aloud
- Problems describing events or stories in proper order
- Mispronunciation of words; difficulty remembering specific words
- Poor ability to remember or understand spoken instructions
- Inability to concentrate and pay attention in class

## **Organizational & Study Skills**

- Poor organization and management of time
- Difficulty beginning and sticking with study tasks
- Poor note taking and outlining skills
- Problems finding and using information from different sources
- Difficulty and anxiety in test taking
- Poor ability to use dictionaries and other study aides

## **Attention & Concentration**

- Difficulty focusing and sustaining attention on academic tasks
- Fluctuations of attention span
- Distractibility
- Difficulty juggling multiple tasks
- Difficulty following oral and written directions
- Inability to complete assignments in time allowed

## **Social Skills**

- Difficulty reading other people, understanding body language or facial expressions Problems interpreting or understanding subtle messages such as sarcasm, teasing, banter or jokes
- Confusion related to time, directions or visual motor coordination
- Poor judgment leading to behavioral problems

## **Teaching Strategies**

Despite their difficulties, students with learning disabilities can and do succeed in the classroom. They can and do meet the same course requirements and performance standards as all other students when allowed to use learning strategies that compensate for their specific deficits. Students with learning disabilities should be expected to perform at a level commensurate with their peers; instructors should not expect less from them.

For students with learning disabilities, comprehension and retention of class material are more likely when there is clarity, repetition, variety, and flexibility in teaching style. Thus, in order for students with LD to have the same opportunities to learn as their peers, several teaching strategies should be taken into consideration. The following guidelines may, therefore, be helpful to faculty in working with students with various types of learning disabilities in the classroom and in the laboratory.

## **Auditory Learning Disabilities**

- Some students may experience difficulty integrating information presented orally, possibly resulting in an inability to easily follow the logic and organization of a lecture.
- During class, provide periodic summaries of the important points. At the end of the lecture, briefly recap the key points to stress their importance one more time.
- Write new terms and important information on the chalkboard or on an overhead transparency, and use them in context to further convey meaning.
- When dealing with abstract concepts, paraphrase them in specific terms-illustrate them with concrete examples, personal anecdotes, hands-on models, or visual tools, such as charts and graphs.
- Speak distinctly and at a relaxed pace, pausing occasionally to allow students to ask questions or to catch up in their note-taking.
- Try to recognize and respond to non-verbal signals of confusion or frustration. Gauge students' understanding by periodically asking them to volunteer an example, a summary, or a response to a question. Keep in mind that students with LD sometimes have difficulty with oral expression. Thus, be sure to only call on volunteers to avoid unnecessary embarrassment.

## **Visual Learning Disabilities**

- Students with LD often read at a slow and deliberate pace, and their comprehension may be impaired. This is particularly true when dealing with large quantities of material. For these students, comprehension and speed are expedited dramatically with the addition of auditory input.
- Make lists of required readings well before the first day of class to allow students to begin their reading early or to arrange to obtain texts on tape.
- Arrange for handouts to be tape-recorded before they are given out in class.
- Read aloud material that is written on the chalkboard or overhead transparencies.
- Provide students with chapter outlines or study guides that cue them to key points in their readings.
- Keep oral instructions concise.
- Repeat or re-word complicated directions.
- Give assignments both orally and in written form.

## **Adjustments in Lecture Classes**

- Assist students in teaming up with a classmate to obtain copies of notes.
- Allow students to use tape recorders and/or notetakers.
- Include time for questions, discussion and requests for further examples before and after class.
- Highlight major concepts and terminology, both orally and visually.
- Verbally describe diagrams, charts and graphs.
- Use color to follow transformations and highlight relationships.
- Remind students of your availability during office hours to clarify lectures and assignments.

## **Written Papers**

- Provide explicit feedback, both oral and written, so that follow-up efforts can be effectively focused.
- Allow oral or taped presentations to supplement written assignments.

## **Examinations**

- Provide additional time to complete examinations.

- Encourage formation of study groups.
- Provide oral quizzes to supplement written exams.
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- Provide oral quizzes to supplement written exams.
- Permit use of a calculator when appropriate.
- Space math problems on a test to reduce extraneous stimuli.
- Avoid use of scantron tests.
- Test in an environment with minimal distractions.
- Permit use of a reader or scribe for exams.
- Permit use of computer or voice dictation software for testing.

## Mobility

Some students with orthopedic disabilities have limited hand function due to conditions such as arthritis, amputation, repetitive stress injury, carpal tunnel, or serious injury. These students require assistance with many aspects of student life. They may have difficulty with routine tasks, including taking notes, performing experiments, and taking exams, both in the classroom and in the laboratory. The following are additional guidelines for accommodations and considerations that would be helpful to students with hand function limitations in their academic pursuits.

A wide range of conditions may limit mobility. Among the most common permanent disorders are musculoskeletal disabilities, such as partial or total paralysis, amputation, or severe injury; active sickle cell anemia; muscular dystrophy; multiple sclerosis; and cerebral palsy. Students with mobility or medical impairments may have a wide variety of characteristics, even with the same disability. Individuals who have experienced a spinal cord injury, for example, are likely to exhibit differing degrees of limitations. Often, crutches, braces, a wheelchair, or customized vehicles are used by students with mobility disabilities. In some instances, a student may be accompanied to class by a personal care attendant.

## Teaching Strategies

- Professors should be aware of classroom accessibility. Often levered door handles or other adaptations are necessary.
- When using an overhead projector or writing on the blackboard, consider making those materials available as a class handout.
- Students should be permitted to complete in-class written assignments outside of class with the use of a scribe, or other appropriate aid, if necessary. An unplanned written exercise, such as filling out forms during class, may require student or faculty assistance.
- Testing accommodations may include use of a scribe or use of a computer adapted with specialized software or input devices.
- Specialized classroom furniture may be necessary to accommodate a student's wheelchair or padded seats and cushions made available for those with back injuries.

## Psychiatric and Psychological Disabilities

A common psychological disability among college students is depression, whether long-standing or temporary in nature. It may be a response to inordinate pressures at school, on the job, at home, or in students' social lives. Depression may manifest itself as apathy, disinterest, inattention, impaired concentration, irritability, fatigue, or other physical symptoms resulting from changes in eating, sleeping, and other living patterns.

Anxiety is another prevalent psychological disability among college students and may also be a reaction to stress. Students who experience severe anxiety may have reduced concentration and distorted perceptions that interfere with the learning process. Anxiety may manifest itself as withdrawal, constant talking, complaining, joking, crying, or extreme fear, sometimes to the point of panic. Bodily symptoms might include episodes of light-headedness or hyperventilation.

While many students who have a history of psychological disabilities are stable and show no symptoms, a few may have fluctuations in behavior and performance. Some may experience side effects when increasing or decreasing their medication. These students have as little control over their disabilities as do students with physical disabilities. Note, however, that having a documented psychological disability does not entitle students to disrupt a class or any other part of the university experience. Students with psychological disabilities are expected to adhere to every rule and regulation pertaining to the behavior of all students. It is important to acknowledge, however, that most of these students are not disruptive at all. Course participation is as much a part of their goals as for students without disabilities, and with the appropriate planning, students with psychological disabilities can be expected to participate fully in the academic environment.

Psychological disabilities may pose many challenges to effective study. A common difficulty faced by students with a psychological disability is low motivation, or even apathy. Students may also have trouble concentrating as a result of the disability or as a side effect of medication. These problems can be both frustrating and anxiety-provoking for the individual. Professors should remember that some people with psychological disabilities may be hesitant to disclose their history due to a fear of the stigma that could result. This is true even when a student may be experiencing academic difficulties. Faculty should respect the student's privacy and treat any disclosures of this nature with the utmost tact and confidentiality.

## Teaching Strategies

- Understand the facts about the disability. Do not pre-judge or assume that a student is unmotivated or lazy. Often the symptoms of a psychological disability, or the effects of medication, can affect a student's ability to submit work on time or take exams in a traditional manner.
- Ask what support the student may need. She or he is the expert on what specific accommodations will make a difference.
- Often the type and level of support needed by students with a psychological disability will fluctuate. Most illnesses are episodic and many students may have extended periods where they do not need or want any special consideration. Let each student's ability to cope with academic requirements, and not the clinical diagnosis, be your guide.
- Discuss any inappropriate behavior with the student privately and forthrightly, delineating the limits of acceptable conduct. In your discussion, do not attempt to diagnose or treat the student, but focus only on the student's conduct in the course.
- Nonverbal communication, i.e. tone of voice, posture, eye contact, facial expression, and physical distance between speakers, is the key to talking to students with psychological disabilities. The goal is for the instructor to create an inviting, comfortable setting and an environment of trust.

- If the student has periods of poor concentration, suggest audio-taping lectures to supplement note-taking. This will allow the student to review lecture material at her or his own pace.
- Preferential seating near the front of the class may also be beneficial for staying focused.
- Exam time is stressful for everyone and for a student with a psychological disability, stress can be especially difficult to handle. Speak with the student prior to deadlines about appropriate mechanisms that will not disadvantage either the student with the disability or other students in the class.
- Students may be admitted to a hospital or need to take time off. This does not necessarily mean that they will need to defer or end their studies. It is possible, with the appropriate support, to continue with academic progress.

## Speech Impairments

Speech impairments interfere with communication, learning, vocational training, and social adjustment. They include disorders of language, articulation, fluency, or voice. Some examples of speech impairments are cleft lip and/or palate, difficulties in projection, as in chronic hoarseness and esophageal speech, and fluency problems, as in stuttering and nominal aphasia, that alter the articulation of particular words or terms.

Some speech difficulties can be managed by such mechanical devices as electronic speaking machines or computerized voice synthesizers. Other individuals may be treated through speech therapy. Any speech impairment can be aggravated by the anxiety inherent in oral communication.

## Teaching Strategies

- The most important element in teaching students with speech impairments is patience. Give students the opportunity, but do not force them to speak in class. Calling on them and putting them "on the spot" will only serve to increase their anxiety levels.
- Permit students the time they require to express themselves, without unsolicited aid in filling in gaps in their speech.
- Maintain comfortable eye contact and posture with the student at all times.
- Address students naturally and in a regular speaking voice. Do not assume that they cannot hear or comprehend what you are saying.
- Consider course modifications, such as one-to-one presentations and the use of a computer with a voice synthesizer, in lieu of a traditional oral presentation.

## **Systemic / Chronic Health Conditions**

Systemic / Chronic Health Conditions include many things that are medical in nature. These conditions may be disability for one student, but not necessarily for all students with the diagnosis. In working with students with systemic or chronic health conditions, the individual accommodations may vary.

### **Arthritis**

Arthritis is a group of conditions that affect the health of the bone joints in the body. Arthritic diseases include rheumatoid arthritis, psoriatic arthritis and more common osteoarthritis. Arthritis can be caused from strains and injuries caused by repetitive motion, sports, overexertion, and falls. Arthritic joints can be sensitive to weather changes. The increased sensitivity is thought to be caused by the affected joints developing extra nerve endings in an attempt to protect the joint from further damage.

### **Acquired Immunodeficiency Syndrome/Human Immunodeficiency Virus**

Acquired Immunodeficiency Syndrome or AIDS is the most severe manifestation of infection with HIV. Acute HIV infection progresses over time to clinical latent HIV infection and then to early symptomatic HIV infection and later, to AIDS, which is identified on the basis of certain infections. Human immunodeficiency virus commonly known as HIV is a retrovirus that primarily infects vital components of the human immune system. It also directly and indirectly destroys cells required for the proper functioning of the immune system, when enough of these cells have been destroyed by HIV, the immune system functions poorly, leading to the syndrome known as AIDS. HIV also directly attacks organs, such as the kidneys, the heart and the brain leading to acute renal failure, dementia and encephalopathy. Many of the problems faced by individuals infected with HIV result from failure of the immune system.

### **Cancer**

Cancer is a class of disorders characterized by uncontrolled division of cells and the ability of these cells to invade other tissues. Cancer may affect people at all ages, but risk increases with age. There are many types of cancer. Severity of symptoms depends on the site and character of the malignancy and whether there is metastasis.

### **Cerebral Palsy**

Cerebral Palsy or CP is a group of disorders resulting from brain damage. Cerebral refers to the brain and palsy to a lack of control over muscles. Any combination of physical and mental status is possible. Symptoms range from slight awkwardness of gait to more unconscious movements and an inability to see, speak, or learn as people without disabilities do. Cerebral palsy is not always associated with mental retardation.

### **Chronic Fatigue Syndrome**

Chronic fatigue syndrome or CFS is a syndrome of unknown and possibly multiple etiologies, affecting the central nervous system (CNS), immune, and many other systems and organs. The most common attributes are severe mental and physical depletion.

### **Cystic Fibrosis**

Cystic fibrosis or CF is a common hereditary human disease which affects many different parts of the body, including the lungs, pancreas, gastrointestinal tract, reproductive organs, and sinuses. Prominent symptoms include growth problems or frequent infections, especially of the lung. As the disease progresses, frequent lung infections often lead to problems breathing, lung damage, prolonged courses of antibiotics, and respiratory failure requiring support by a ventilator. CF can also lead to frequent sinus infections, diabetes

mellitus, difficulty with digestion, and infertility. Currently, most individuals with cystic fibrosis die young, often in their 20s and 30s due to lung failure.

## **Diabetes**

Diabetes mellitus is a medical disorder characterized by varying or persistent high blood sugar levels resulting from the defective secretion or action of the hormone insulin.

## **Fibromyalgia**

Fibromyalgia also referred to as FM or FMS is a debilitating chronic syndrome characterized by diffuse and/or specific muscle, joint, or bone pain, fatigue, and a wide range of other symptoms.

## **Irritable Bowel Syndrome**

Irritable bowel syndrome or spastic colon is a functional bowel disorder characterized by abdominal pain and changes in bowel habits.

## **Migraines**

Migraine is a neurological disease, of which the most common symptom is an intense and disabling episodic headache. Migraine headaches are usually characterized by severe pain on one or both sides of the head and are often accompanied by hypersensitivity to light and sound as well as nausea.

## **Multiple Sclerosis (MS)**

The chronic, progressive disease of the neurological system affects important functions of daily living such as walking, talking, seeing, eating, tying a shoe, opening a door, etc. There is no known cure, and the cause has yet to be found.

## **Muscular Dystrophy (MD)**

The term muscular dystrophy refers to a group of disorders characterized by progressive muscle weakness and loss of muscle tissue. Disorders are distinguished by the type of inheritance (dominant genes, recessive gene, and so on), the age when symptoms appear, and the types of symptoms that develop. Because these are inherited disorders, risks include a family history of muscular dystrophy.

## **Parkinson's Disease**

Parkinson's disease is a progressive disorder of the central nervous system. Clinically, the disease is characterized by a decrease in spontaneous movements, gait difficulty, postural instability, rigidity and tremors.

## **Seizure Disorders**

A brain disorder in which clusters of nerve cells, or neurons, in the brain sometimes signal abnormally. In epilepsy, the normal pattern of neuronal activity becomes disturbed, causing strange sensations, emotions, and behavior or sometimes convulsions, muscle spasms, and loss of consciousness. Epilepsy is a disorder with many possible causes.

## **Sickle Cell Anemia**

Sickle cell disease is a general term for a group of genetic disorders. This process damages the red blood cell membrane, and can cause the cells to become stuck in blood vessels. This deprives the downstream tissues of oxygen and causes ischemia and infarction. The disease is chronic and lifelong. Individuals are most often well, but their lives are punctuated by periodic painful attacks. In addition to periodic pain, there may be damage of internal organs, such as stroke. Lifespan is often shortened. It is common in people from parts of the world

where malaria is or was common, especially in West Africa or in descendants of those peoples. Sickle cell disease can occur in any individual of any color or ethnicity, however.

### **Traumatic Brain Injury (TBI)**

Traumatic brain injury means an acquired injury to the brain caused by an external physical force, resulting in total or partial functional disability or psychosocial impairment, or both, that adversely affects an individual's educational performance. The term applies to open or closed head injuries resulting in impairments in one or more areas, such as: cognition; language; memory; attention; reasoning; abstract thinking; judgment; problem-solving; sensory, perceptual, and motor abilities; psychosocial behavior; physical functions; information processing; and speech. The term does not apply to brain injuries that are congenital or degenerative, or to brain injuries induced by birth trauma.

### **Tourette Syndrome**

Tourette syndrome (TS) is an inherited, neurological disorder characterized by repeated involuntary movements and uncontrollable vocal (phonic) sounds called tics. In a few cases, such tics can include inappropriate words and phrases.

## Visual disabilities

Visual disabilities encompass disorders in the structure and function of the eye that are manifested by at least one of the following:

- A visual acuity of 20/70 or less in the better eye after the best possible correction,
- A peripheral field so constricted that it affects the student's ability to function in an academic setting,
- A progressive loss of vision which may affect the ability to function in an educational setting. Some examples of visual disabilities are cataracts, glaucoma, retinal detachment, retinal pigmentosa, and strabismus.

Students with visual impairments may be blind or partially sighted. These designations are based on measures of visual acuity and have little educational relevance. Many students who are legally blind are not functionally blind. Some are able to read regular print; others can read print that is enlarged or print that is viewed through a magnifying device. To record notes, some may use a device such as a lap top computer or tape recorder, while others may use volunteer note takers. Instructor planning and adaptive equipment will minimize difficulties.

## Characteristics

Students with visual disabilities are constantly challenged by traditional classroom instructional strategies, which are largely visually dependent. Although lectures and discussions are easily heard by these students, class syllabi, textbooks, overhead projector transparencies, maps, videos, written exams, demonstrations, films, etc., are not easily accessed.

For many individuals with visual disabilities, the advancements in modern technology have been extremely beneficial. The equipment that is now available makes learning much more accessible to them. Students with visual disabilities use synthesized voice adaptations or enlarged print when using a computer. Machines are available to enlarge the print of any printed material, or printed material can be converted to Braille. Another machine can convert printed material into synthesized voice. Some students also use talking calculators, and for others, a tape recorder is helpful for taking notes.

## Teaching Strategies

The following is a listing of suggestions that may assist you when instructing students with visual disabilities. Suggestions listed in the 'General Procedures' section may also apply to students with visual disabilities.

### Lecture Classes:

- Provide reading lists or syllabi in advance to allow time for arrangements to be made for taping or Braille of texts and other required readings.
- Provide copies of classroom materials in large print formats by enlarging them on a photocopier or use at least an 18 point high contrast font when word processing.
- Plan field trips and special projects such as internships well in advance and alert field supervisors to whatever adaptations may be needed.
- Get to know students with visual disabilities early in the semester. Meet with them and find out what, if anything, they are able to see. Approximately 80% of students with visual disabilities will have some usable vision.
- Like anyone else, students with visual disabilities appreciate being asked if help is needed before it is given. Ask a student if he or she would like some help and then wait for a response before acting.

- If a student has a harnessed guide dog, it is working and should not be treated as a pet by others in the class.
- Be specific when giving directions or alerting students with a visual disability to obstacles. It is more helpful to say, 'Please have a seat-there is a chair directly on your right' rather than, 'Have a seat over there.'
- Convert directions to the student's perspective. When giving assistance in seating, place the person's hand on the back or arm of the seat.
- Never leave a person who is blind in an open area. Instead, lead her or him to the side of the room or to a chair or some landmark from which she or he can obtain a direction for travel.
- Also do not leave the person abruptly after talking in a crowd, or where there is noise that may obstruct the person's hearing, without saying that you are leaving. Otherwise, she or he may continue talking when no one is listening or present.
- When there is a blind student in the classroom, remember not to use phrases such as 'this and that.' For example, 'The sum of this, plus that, equals that,' is very confusing.
- By using enhanced verbal descriptions in your class, blind students as well as sighted, will benefit from the vivid descriptive materials.
- Use familiar objects in comparisons and analogies that don't depend on prior visual knowledge, such as foods or objects found around the house.
- Words and phrases that refer to sight, such as 'I'll see you later,' are commonly used expressions and usually go unnoticed unless the speaker is particularly self-conscious. Students with vision loss can still 'see' what is meant by such expressions and may not be offended by them. They may be embarrassed, however, by clumsy attempts to avoid such common usage.
- When writing on the blackboard or using overheads, read aloud the written material.
- During discussions, try to acknowledge students by name so that students with visual disabilities will know who is participating.
- When lecturing, pace the presentation of material; if referring to a textbook or handout, allow sufficient time for students to find the information.
- Partially sighted students should not be overlooked. They sometimes have greater difficulty in college than do totally blind students, partly because some try to 'blend in,' and don't use special assistance or ask questions.

### **Written Papers:**

- Provide plenty of notice when assigning research papers as print materials may need to be converted to large print, electronic text, audio tape or Braille.
- Establish flexible guidelines.

### **Examinations:**

- Allow students to take tests orally.
- Provide extended time to take exams.
- Allow students to tape record test answers.