



Cornell University  
Student Disability Services

**STUDENT DISABILITY SERVICES  
FACULTY HANDBOOK**

*A Resource Manual for Providing  
Reasonable Accommodations to  
Students with Disabilities*

# Table of Contents

**Section I: Universal Design..... 2**  
 What is Universal Design for Instruction? ..... 3  
 Who Benefits? ..... 3  
 The Principles of Universal Design for Instruction© ..... 4

**Section II. General Information ..... 6**

**Confidentiality .....7**

**Disclosure .....7**

**Documentation .....7**

**Rights and Responsibilities .....7**

**Reasonable Accommodations.....9**

**Temporary Disabilities .....10**

**Support for all Students with Disabilities .....11**  
 Syllabus Statement ..... 11  
 Textbooks, Course Packs, Syllabi, Videos ..... 11  
 Recommendations for All Courses ..... 11  
     General Recommendations ..... 12  
     Instructional Strategies ..... 12  
     Evaluation ..... 12  
     How to Accommodate Various Academic Activities ..... 13

**Section III: Information about Specific Disabilities ..... 14**

**Asperger’s Syndrome .....15**  
 Common Characteristics..... 15  
 Instructional Strategies ..... 15  
 Typical Accommodations..... 15

**Attention Deficit/Hyperactivity Disorder (ADHD) .....16**  
 Instructional Strategies ..... 16  
 Typical Accommodations..... 16  
 Strategies for Student Success ..... 16

**Learning Disabilities .....18**  
 Instructional Strategies ..... 18  
 Specific Areas that May be Affected by LD..... 18  
     Written and Spoken Language..... 18  
     Mathematics ..... 20  
     Foreign Language ..... 21  
     Sequential Memory ..... 21  
     Organization and Attention ..... 22

- General Recommendations..... 22
  - Individual Differences Awareness..... 22
  - Conferences with Students ..... 22
  - Making a Referral..... 22
- Instructional Strategies ..... 23
  - Classroom..... 23
  - Papers ..... 23
  - Tests and Exams ..... 23
- Typical Accommodations..... 23
- Blindness and Vision Impairments.....25**
  - Instructional Strategies ..... 25
    - General ..... 25
    - Classroom..... 25
  - Visual Elements of a Lecture..... 26
  - Evaluation..... 26
  - Guide Dogs..... 26
  - Typical Accommodations..... 26
- Deafness and Hearing Impairments.....28**
  - Sign Language Interpreting and Real-Time Captioning ..... 28
  - Instructional Strategies ..... 28
    - General ..... 28
    - Classroom..... 29
  - Typical Accommodations..... 29
  - Working with Captionists..... 30
- Chronic Medical Conditions .....34**
  - Types of Health-Related Impairments ..... 34
  - Instructional Strategies ..... 35
  - Typical Accommodations..... 36
- Mobility Impairments.....37**
  - Types of Mobility Impairments ..... 37
  - Additional Information ..... 37
    - Wheelchairs ..... 37
    - Personal Space..... 37
    - Relative Height..... 38
    - Transportation..... 38
  - Instructional Strategies ..... 38
    - General ..... 38
    - Classroom..... 38
    - Physical Education ..... 38
  - Typical Accommodations..... 38
- Psychological Disabilities.....40**
  - Common Psychological Disabilities..... 40
  - Important Facts about Psychological Disabilities..... 40
  - Instructional Strategies ..... 40
    - General ..... 40

Classroom ..... 41  
Typical Accommodations ..... 41

**Speech and Language Disorders.....42**  
Instructional Strategies ..... 42  
Typical Accommodations ..... 43

***Section IV: Communicating with People with Disabilities ..... 44***

**Suggestions for Meeting People with Disabilities .....45**  
Speaking About People with Disabilities ..... 45  
Suggestions for Interacting with Students with Vision Impairments..... 46  
Etiquette for Interacting with Service Dogs ..... 46

***Section V: Resources ..... 48***  
Disability Rights ..... 49  
Cornell University – For Students ..... 49  
Cornell University – Faculty Information ..... 49  
Captioning Videos ..... 49  
Universal Design ..... 49  
Web Accessibility ..... 50  
Workplace Accessibility ..... 50

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Dear Cornell Faculty Members,

Greetings from the Student Disability Services (SDS) office. We are pleased to offer this *Resource Guide on Students with Disabilities* to the Cornell faculty to support your efforts in teaching students with disabilities. This guide provides information about the conditions that encompass the heterogeneous category of disability and suggestions for addressing disability-specific instructional issues.

The process of providing accommodations and services for the 800+ students registered with SDS is a collaborative process between SDS, the student and instructor. SDS determines eligibility for disability services and approves accommodations based on limitations caused by the student's disability. Instructors are responsible for providing the approved accommodations for students enrolled in their courses. The most frequently used accommodation is extended time for exams. This addresses many issues that students face as a result of their disability.

Increasingly we are working with students whose disabilities cannot be addressed with the accommodations that have been successful in the past. Chronic medical conditions and psychiatric disabilities pose new challenges to ensuring equal access while maintaining academic standards and reasonable modifications. The staff at SDS assists faculty and students with identifying the impact of the disability on the course or degree program and recommending mitigating measures to ensure non-discrimination and equal access.

Universal Design in Instruction (UDI) is an approach to teaching that incorporates inclusive instructional strategies in course design and delivery to benefit the broadest range of learners, thus the need for individual accommodations are minimized. Through the nomination process for the Award for Universal Design in Instruction, the SDS Advisory Board has had the opportunity to learn of many faculty members whose teaching embraces the principles of UDI. More information about UDI is found in this guide.

It is my hope that this resource guide will provide insight into how a disability affects a student academically and assist you in the important endeavor of creating an accessible academic environment.

Best regards,

Katherine Fahey  
Director, Student Disability Services

## **Section I: Universal Design**

## What is Universal Design for Instruction?

Universal Design for Instruction (UDI)<sup>1</sup> is an approach to teaching that consists of proactive design and the use of inclusive instructional strategies that benefit a broad range of learners including students with disabilities. In other words, the principles of Universal Design benefit all students and prevent the need for “retro-fitting” teaching methods when a student in class discloses a disability.

*The Nine Principles of UDI* provide a framework for college faculty to use when designing or revising instruction to be responsive to diverse student learners and to minimize the need for special accommodations and retrofitted changes to the learning environment. UDI operates on the premise that the planning and delivery of instruction, as well as the evaluation of learning, can incorporate inclusive attributes that embrace diversity in learners without compromising academic standards.

## Who Benefits?

Universal design benefits students with disabilities but also benefits others. For example, captioning course videos, which provides access to deaf students, is also a benefit to students for whom English is a second language, to some students with learning disabilities, and to those watching the tape in a noisy environment. Delivering content in redundant ways can improve instruction for students with a variety of learning styles and cultural backgrounds. Letting all students have access to your class notes and assignments on a website benefits students with disabilities and everyone else. Putting a class outline or a PowerPoint presentation on a class web page allows students to prepare in advance of class and fill in notes as you lecture, leaving more time for concentration and attention to the lectures. Planning ahead saves time in the long run.

Employing universal design principles in everything we do makes a more accessible world for all of us. It minimizes the need to alter it for anyone.

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*The Principles of Universal Design for Instruction*©

| Principle                                      | Definition   | Examples  |
|--|--|---|
| <b>Principle 1:</b><br>Equitable use           | Instruction is designed to be useful to and accessible by people with diverse abilities. Provide the same means of use for all students; identical whenever possible, equivalent when not.                 | Provide links to online support and resources so all students can access materials as needed regardless of varying academic preparation, need for review of content, distance from campus, etc.   |
| <b>Principle 2:</b><br>Flexibility in use      | Instruction is designed to accommodate a wide range of individual abilities. Provide choice in methods of use.   | Use of varied instructional methods (lecture with a visual outline, group activities, use of stories, or web board/chat discussions to provide different ways of learning and experiencing knowledge.   |
| <b>Principle 3:</b><br>Simple and Intuitive    | Instruction is designed in a straightforward and predictable manner, regardless of the student's experience, knowledge, language skills, or current concentration level. Eliminate unnecessary complexity. | Provision of a grading rubric for papers or projects to clearly lay out expectations for performance.   |
| <b>Principle 4:</b><br>Perceptible information | Instruction is designed so that necessary information is communicated effectively to the student, regardless of ambient conditions or the student's sensory abilities.                                     | Selection of text books, reading material, and other instructional supports in digital format or online so students with diverse needs (e.g., vision, learning, attention, ESL) can access materials through traditional hard copy or with the use of various technological supports (e.g. screen reader, text enlarger, on-line dictionary). |
| <b>Principle 5:</b><br>Tolerance for error     | Instruction anticipates variation in individual student learning pace and prerequisite skills.   | Allow students to use a word processor for writing and editing papers or essay exams.   |

|  |   |  |
|--|---|--|
| <p><b>Principle 6:</b><br/>Low physical effort</p>                 | <p>Instruction is designed to minimize nonessential physical effort in order to allow maximum attention to learning.<br/><i>Note: This principle does not apply when physical effort is integral to essential requirements of a course.</i></p> | <p>Allow students to use a word processor for writing and editing papers or essay exams.</p>   |
| <p><b>Principle 7:</b><br/>Size and space for approach and use</p> | <p>Instruction is designed with consideration for appropriate size and space for approach, reach, manipulations, and use regardless of a student's body size, posture, mobility, and communication needs.</p>                                   | <p>In small class settings, use of a circular seating arrangement to allow students to see and face speakers during discussion - importance of students with attention deficit disorder or who are deaf or hard of hearing.</p>                |
| <p><b>Principle 8:</b><br/>A community of learners</p>             | <p>The instructional environment promotes interaction and communication among students and between students and faculty.</p>  | <p>Fostering communication among students in and out of class by structuring study groups, discussion groups, e-mail lists, or chat rooms.</p>   |
| <p><b>Principle 9:</b><br/>Instructional climate</p>               | <p>Instruction is designed to be welcoming and inclusive. High expectations are espoused for all students.</p>  | <p>A statement in the class syllabus affirming the need for class members to respect diversity in order to establish the expectation of tolerance as well as encourage students to discuss any special learning needs with the instructor.</p> |

Note: From Principles of Universal Design for Instruction by Sally Scott, Joan McGuire and Stan Shaw, Center on Postsecondary Education and Disability, University of Connecticut. Copyright 2001. Reprinted with permission.

## **Section II. General Information**

## CONFIDENTIALITY

Many students are extremely sensitive about requesting assistance because they do not want to be thought of as being “different” from their peers. The knowledge of a disability must be treated, by law, in a confidential manner by the instructor. Identifying a student to peers or making comments about a student’s disability in class clearly violates the student’s right to privacy. Care must be taken to handle testing accommodations in a discreet manner.

## DISCLOSURE

Cornell does not have an alternate admissions process for students with disabilities. Students with disabilities are admitted under the same highly selective criteria as other students. Students with disabilities are not obliged to disclose a disability during the admissions process, nor at any point during their tenure at Cornell. However, in order to qualify for accommodations, it is necessary for students with disabilities to self-identify and submit disability documentation that meets Cornell’s documentation guidelines for eligibility for services.

## DOCUMENTATION

Student Disability Services (SDS) provides a Faculty Notification Letter recommending accommodations only after a student has met the strict criteria that qualify him or her for accommodations. Cornell University’s documentation guidelines for determining eligibility for services were developed based on recommendations by the Association of Higher Education and Disability (AHEAD).

SDS bases its recommendations on functional limitations documented by certified professionals and the request of the student. For example, a student may provide a letter from a physician supporting a diagnosis of clinical depression. This diagnosis in itself may not warrant academic accommodations. However, if the letter includes an explanation that the current medication used to control the depression may cause a slowing of the cognitive processes, accommodations may be necessary.

## RIGHTS AND RESPONSIBILITIES

Federal law (Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990) was written with the intent of protecting people with disabilities from discrimination and clearly states that students with documented disabilities must be provided with the reasonable accommodations required to provide equal access in programs and activities.

As an institution of higher education, **Cornell University has the right to:**

- Identify and establish essential functions, abilities, skills, knowledge, requirements, and standards for courses, programs, services, and activities, and to evaluate students on this basis.
- Request and receive, through SDS, current documentation that supports requests for accommodations, academic adjustments, and/or auxiliary aids and services.
- Deny a request for accommodations, academic adjustments, and/or auxiliary aids and services if the documentation demonstrates that the request is not

warranted, or if the individual fails to provide appropriate documentation.

- Select among equally effective accommodations, adjustments, and/or auxiliary aids and services.
- Refuse an unreasonable accommodation, adjustment, and/or auxiliary aid or service that imposes a fundamental alteration of a program or activity or places an undue burden on the university.

**The university has the responsibility to:**

- Provide information to students with disabilities in accessible formats upon request.
- Ensure that courses, programs, services, and activities, when viewed in their entirety, are available in the most integrated and appropriate settings.
- Evaluate students on their abilities and not their disabilities.
- Provide or arrange for reasonable accommodations, academic adjustments, and/or auxiliary aids and services for students with disabilities in courses, programs, services, and activities.
- Maintain appropriate confidentiality of records and communication except where sharing information is permitted or required by law or when the student requests that such information be shared.

**Faculty members at Cornell University have the right to:**

- Receive notification in writing from SDS of a student's need for accommodation. (Faculty and staff do not have the right to access disability documentation.)
- Decide if an accommodation request meets the academic requirements of the course.
- Contact SDS to clarify student requests for accommodation, academic adjustments, and/or auxiliary aids.

**Faculty members at Cornell University have the responsibility to:**

- Provide reasonable accommodations, academic adjustments, and/or auxiliary aids in a timely manner.
- Meet with students who have provided written notification of their disability via SDS and have made a direct request for accommodation.
- Maintain the confidentiality of information regarding disability issues.
- Alter the form of a testing procedure to measure proficiency in course knowledge based on the ability of the student, not the disability. (There may be an exception when the purpose of the test is to measure a particular skill.)
- Refer to SDS students who have requested accommodations but have not yet registered with our office.
- Upon request, provide handouts in alternate formats, such as enlarged print for visually impaired students.
- Upon request, make course material on reserve in the library available in alternate formats for students with disabilities.

**Students with disabilities at Cornell University have the right to:**

- Equal access to courses, programs, services, and activities offered through the university.
- Request reasonable accommodations where a disability may pose a barrier to equal access.
- To learn, and to receive reasonable accommodations and academic adjustments in an effort to diminish the effect of the disability on academic functioning.
- Determine who will receive disability-related materials within and outside the university.
- All other rights and privileges available to other students at Cornell University.

**Students with disabilities at Cornell University have the responsibility to:**

- Meet qualifications and maintain essential institutional standards for courses, programs, and activities.
- Self-identify as an individual with a disability when an accommodation is needed and seek information, counsel, and assistance as necessary in a timely fashion.
- Demonstrate and/or provide documentation (from an appropriate professional) on how the disability limits participation in courses, programs, services, and activities.
- Follow university procedures for obtaining reasonable accommodations, academic adjustments, and/or auxiliary aids and services.

**REASONABLE ACCOMMODATIONS**

Reasonable accommodations are designed to level the playing field for students with disabilities. These should not be construed as “special treatment” but may become such if students with disabilities are not held to the same academic standards as other students. Giving students accommodations that far exceed those deemed appropriate by SDS could also be construed as “special treatment.” For example, it is unnecessary to give exams in open book format, offer unlimited time, not proctor exams (if they are proctored for other students), or modify exams or other class materials, if doing so will not adequately measure the student’s competency in the class.

Students with disabilities should not be guaranteed A’s, or even a passing grade. Students with disabilities are expected to abide by the University Code of Academic Integrity. Those who violate this Code are subject to the same disciplinary processes as other students.

It is appropriate to deny a student’s request for accommodations beyond those requested by Student Disability Services. Instructors who have questions or concerns about accommodation requests are encouraged to call Student Disability Services at 254-4545.

## **TEMPORARY DISABILITIES**

Under New York State Law, students with temporary disabilities are afforded accommodations as needed on a short-term basis. Typical accommodations for a temporary disability as a result of, for example, a broken arm, would include more time on tests or a scribe. A student may be late or miss class and need assistance. SDS can provide some adaptive equipment and support in assisting students with temporary disabilities.

Transportation for students with temporary mobility impairments is provided by Student Disability Services in the form of free TCAT bus passes and the CU Lift service, which provides rides between campus buildings and campus housing units.

## SUPPORT FOR ALL STUDENTS WITH DISABILITIES

### Syllabus Statement

An instructor can help normalize the accommodation process by making an announcement at the first class meeting and by including a statement on the syllabus inviting students with disabilities to meet during office hours to discuss accommodation needs. The wording of the statement can vary to meet the needs of the individual class but should include the following three pieces of information:

- An invitation to any student with a documented disability to meet, in a confidential environment, to discuss his or her need for academic adjustments with the faculty member and to work out the logistics of the accommodations. This discussion should lead to an understanding about how the academic adjustments will fit into the curriculum and the development of a plan to provide the accommodations.
- Notification that students must present requests for accommodation in a timely manner. Faculty members can require students to make accommodation requests at the beginning of the semester but need to be flexible in certain cases. Some students may be diagnosed with a disabling condition in the middle of a semester, or administrative delays may impede the processing of necessary paperwork.
- A statement encouraging students to register with Student Disability Services, if they haven't done so previously, for disability verification and to determine reasonable accommodations.

Here is a sample syllabus statement:

*Note to students with disabilities: If you have a disability-related need for reasonable academic adjustments in this course, provide (Instructor, TA, Course Coordinator) with an accommodation letter from Student Disability Services. Students are expected to give two weeks' notice of the need for accommodations. If you need immediate accommodation, please arrange to meet with (Instructor, TA, Course Coordinator) within the first two class meetings.*

### Textbooks, Course Packs, Syllabi, Videos

At the time that students pre-register for classes, SDS starts converting print materials into alternative formats for students who have visual impairments or learning disabilities. Therefore, it is helpful if faculty have the syllabus and course reading list ready four weeks prior to the beginning of classes so alternative formats of the materials can be prepared, if necessary. This includes having compiled course packs and, when possible, procuring videos. All print and audio materials require conversion to accessible formats in order to be usable by students with various disabilities.

### Recommendations for All Courses

There are instructional choices that faculty can make that will render courses more accessible to students with varying learning styles and abilities. This may also diminish the need to make significant changes as students with disabilities request accommodations.

### ***General Recommendations***

- Have a detailed syllabus available during the course enrollment period. Students may need to determine if a course is a good fit with their strengths and abilities, and SDS may need to arrange accommodations in advance.
- Announce reading assignments well in advance for students who are using alternative formats for print materials.
- Give assignments in both verbal and written format.
- Make all web-enhanced elements of the course accessible.
- When creating course reserves, keep the font size of the reserve document as close as possible to that of the original document. Good copies of material make alternative text conversion much easier.
- Inform your students about the learning resources available to them on campus.
  - The Learning Strategies Center (LSC) is a resource for undergraduates who seek support in various disciplines. The LSC offers courses in study skills and supplemental instruction in several courses. The LSC has a statistics and reading improvement lab in 420 CCC.
  - The Knight Institute provides students with workshops and tutoring in writing skills. They can be reached by telephone at 255-4061 or by email at [knight\\_institute@cornell.edu](mailto:knight_institute@cornell.edu).
- Encourage students to use office hours to clarify course material.

### ***Instructional Strategies***

- Use the web to post a general outline in advance of each class.
- Consider providing class notes in an accessible format, such as Microsoft Word.
- Teach in a multi-modality/multi-sensory format to reach all learning styles. Combine visual and auditory modalities when presenting lecture material and then create experiential learning through group work and hands-on application of the material.
- Start each lecture with an outline of material to be covered. At the conclusion of class, briefly summarize key points.
- Put new vocabulary on the blackboard.
- Allow the recording of lectures.
- Provide an adequate opportunity for questions and answers including review sessions.
- Consider audio recording the lectures and making them available after the class session.

### ***Evaluation***

- Provide sample questions, practice exams and information about the exam format. Provide examples of well-answered exam questions.
- Provide examples of “good” writing for the course and discipline. Give feedback in writing that students can incorporate into future assignments.

- When appropriate, allow the use of calculators, paper and dictionaries.

### ***How to Accommodate Various Academic Activities***

For more in-depth resources regarding best practices for accommodations in various academic settings such as field work, group discussions, science labs, etc., please visit DO-IT's Faculty Room ([www.washington.edu/doi/Faculty/Resources](http://www.washington.edu/doi/Faculty/Resources)). DO-IT (Disabilities, Opportunities, Internetworking, and Technology) serves to increase the successful participation of individuals with disabilities in challenging academic programs and careers such as those in science, engineering, mathematics, and technology.

## **Section III: Information about Specific Disabilities**

## **ASPERGER’S SYNDROME**

Asperger’s Syndrome is often referred to as High Functioning Autism. Individuals with Asperger’s often have unusually strong, narrow interests and above-average to superior intellect. Because of limited ability to perceive social subtexts and to respond appropriately, they typically have difficulty with social interactions. They tend not to have a wide range of facial and vocal expression and are most comfortable with predictable routine; conversely they may be quite disturbed by changes in familiar and expected routines.

### **Common Characteristics**

Students with Asperger’s Syndrome may exhibit some of the following behaviors in general social interaction and also in the classroom.

- Poor eye contact
- Inappropriate social interaction
- Very literal and concrete thinking patterns
- Limited voice intonation and/or volume
- Impulsivity
- Sensitivity to sensory stimuli (bright light, touch, sounds)

Students may:

- Attempt to monopolize conversation
- Become tangential in answering questions
- Exhibit distracting behavior in long classes
- Engage in self-stimulating behavior (rocking, tapping, playing with “stress toys”)
- Be argumentative

### **Instructional Strategies**

- Breaks during class, particularly for movement
- Redirecting responses to bring student to point of answer

### **Typical Accommodations**

- Extended time for tests and in-class assignments
- Reduced-distraction test environment
- Note takers if distraction is a problem for the student
- Individual work with students and/or faculty members to assist with understanding assignments
- Accommodation for work/assignments dependent on groups (usually accommodated with an assignment for the individual student)
- Written instructions
- Computer use, especially word processing for writing
- Advanced notice and preparation when changes are anticipated

## **ATTENTION DEFICIT/HYPERACTIVITY DISORDER (ADHD)**

Attention Deficit/Hyperactivity Disorder is a neurological disorder characterized by an inconsistent ability to maintain attention and motivation, manifested in academic, employment, and/or social situations. Not all students with ADHD will exhibit the same symptoms, but generally in an academic setting, ADHD is characterized by careless mistakes and disorganized work. Students often have difficulty concentrating on and completing tasks, frequently shifting from one uncompleted activity to another. In social situations, inattention may be apparent from frequent shifts in conversation, poor listening comprehension, and not following the details or rules of games and other activities. It is often assumed that individuals will outgrow ADHD; however, for approximately 60% of individuals with ADHD, it is a lifetime condition. That said, students with ADHD who attend Cornell have met the same admissions criteria, have excelled in previous academic endeavors and perform well while attending Cornell.

### **Instructional Strategies**

- Provide a syllabus with clear explanations of course objectives with specific due-dates for assignments.
- For large projects or long papers, break down the task into smaller parts.
- Give verbal reminders in class of upcoming deadlines regarding homework assignments and upcoming exams.
- Provide an outline of each lecture at the start of class.
- When possible, start each lecture with a summary of material to be covered and conclude each lecture with a summary of major points addressed.
- Students with ADHD may start to “drift” during class. A varied format may help to keep their attention.

### **Typical Accommodations**

- Use of speech-to-text software
- Alternative print formats
- Textbooks on tape
- Tape recording lectures
- Note takers
- Reduced-distraction test environment
- Extended time for tests and in-class assignments
- Computer access for essay exams

### **Strategies for Student Success**

- The use of a day planner
- Writing down all assignments
- Taking notes in class, rewriting notes after class
- Breaking tasks down into manageable components

- Setting reasonable goals and using a checklist to keep track of progress
- Use of an audio recorder for lectures and studying
- Working on projects with someone who has strong organizational skills
- Getting feedback on social behavior from a trusted friend

## LEARNING DISABILITIES

The definition of a specific learning disability used by Cornell University was written by the National Joint Committee on Learning Disabilities. *Learning Disability* (LD) is a general term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and the use of listening, spelling, reading, writing, reasoning, or mathematical ability. These disorders are intrinsic to the individual, presumed to be due to central nervous system dysfunction and may occur across the life span. Problems in self-regulatory behaviors, social perceptions, and social integration may exist with learning disabilities but do not by themselves constitute a learning disability. Although learning disabilities may occur concomitantly with other disabilities, they are not the result of those conditions or influences.

A learning disability is not a disorder that a student “grows out of.” It is permanent disorder that can have a significant effect on learning but is not an indicator of intelligence. LD can often cause inconsistent academic performance and may only require accommodation in specific classes or may have a global effect on academic functioning.

A learning disability is unique to the individual and can be manifested in a variety of ways. Therefore, accommodations for a student with a specific learning disability must be tailored to the individual. Determining accommodations is not an exact process but is based on the functional limitations identified in the student’s psycho-educational evaluation. SDS counselors may re-evaluate accommodations with the student and faculty as the semester progresses as not all needs may be evident until the class gets underway.

### Instructional Strategies

- Connect readings to students’ prior knowledge, examples and stories.
- Give assignments in both verbal and written format.
- Provide opportunities for class discussion of readings. Encourage students to summarize, make predictions, and explore multiple interpretations of text.
- Provide thought questions to guide students through dense reading.

### Specific Areas that May be Affected by LD

#### *Written and Spoken Language*

The student may have difficulty with spelling, (e.g., mixing up letters) or with speaking (e.g., reversing words or phrases). Vocabulary used may be less sophisticated than expected for college level work. The student may have difficulty monitoring his or her writing for errors in spelling, grammar, word order and word endings, subject-verb agreement, punctuation, and paragraph formation. Handwriting can be poorly formed or illegible with letters and words being unevenly spaced on the page. Students with writing disabilities sometimes use a mixture of printed and cursive writing and upper- and lower-case letters in the same document.

#### *Reading*

Reading involves the skills of decoding and comprehension; students with reading disabilities may have difficulty with one or both of these skills. Decoding involves recognizing the phonemic units as words. Comprehension involves attaching

meaning to words. A limitation in either area will result in a reading process that is extremely labored. Students with comprehension difficulties will often need to read a passage several times before they are able to attach meaning.

#### *Instructional Strategies*

- Provide information about textbooks and readings in advance so that students can start reading before the semester begins or have information converted to electronic text for use with screen-reading technology.
- Provide questions to guide reading.
- Connect text material to lecture and course objectives.
- Encourage students to discuss readings together outside of class.
- Provide opportunities in class for clarification and questions about readings.
- Avoid closely-worded multiple-choice exams, which often do not allow students to demonstrate course knowledge.

#### *Writing*

Students with a learning disability affecting written expression have problems communicating effectively through writing. Whether these difficulties are related to dyslexia or to the physical act of printing or writing (dysgraphia), the outcome is likely to be written work that appears careless. Sentences are sometimes incomplete with essential words and phrases missing. The organization of the paper can be choppy, jumping from one idea to the next and back again. The student may write more simply or with less content than would be expected from their understanding of the subject matter.

Some of the difficulties these students experience with in-class essays and essay exams may be mitigated by the use of a computer or word processor with spell check, grammar check, and cut-and-paste capabilities. A student with written language disabilities may also benefit from working with a tutor at the Knight Institute for Writing or with a writing tutor from the Learning Strategies Center.

#### *Instructional Strategies*

- Provide examples of well-written papers, cases, and lab reports and explain why they are well written
- Provide opportunities for students to submit drafts for feedback.
- Provide feedback in writing so it can be saved by the student to incorporate into future assignments.
- Explain the assignment verbally and in writing.
- Provide deadlines for stages of the writing process to discourage last minute work and to encourage a well-constructed essay.
- Encourage the student to get started with the writing process by recording their thoughts into a tape recorder, making an outline or a graphic organizer.

#### *Oral Language – Expression*

Some students are eloquent writers yet have extreme difficulty in formulating an immediate verbal response to a question. They may appear socially inept as they are unable to gather and express their ideas amidst the fast pace of active dialogue. During oral presentations, their thoughts may come out jumbled and chaotic and

they may use many filler words, such as, “uh,” “er,” “um,” as they struggle to express themselves. Reading aloud in class and taking oral quizzes and tests can be stressful and embarrassing.

#### *Instructional Strategies*

If oral expression is not a fundamental requirement of the course being taught, you may allow a student to complete an oral assignment using a different format. Some students may benefit from videotaping their presentation for viewing or delivering their presentation to the instructor privately.

#### ***Oral Language – Comprehension***

Students who have a disability related to *taking in* oral information may have difficulty listening and taking notes at the same time. The problem may relate to difficulties in differentiating relevant from irrelevant details. This student frantically tries to write down everything being said. Similarly, students with *dysgraphia*, who extend more than the normal focus and energy in actually writing words they are hearing, may fall behind in taking notes and miss examples and nuances of a lecture that aid other students in understanding and memory.

#### *Instructional Strategies*

- Provide an outline at the beginning of the lecture and summarize key points at the end.
- Identify key terms.
- Allow students to tape lectures.
- Allow use of adaptive techniques similar to those used for deaf students—note takers, films, role-playing, captioned videotapes, and other visual materials.
- Give instructions and assignments both orally and in written form.

#### ***Mathematics***

To be successful in understanding math concepts and in knowing when and how to apply them, the student must have strong language, memory, sequencing, and problem-solving skills. Students who have disabilities in math reasoning and calculation (dyscalculia) may make errors that seem to be “dumb mistakes,” e.g., reversing numbers, miscopying and/or misaligning columns of figures, and making errors when changing operational signs and performing other conversions. Other students experience difficulty remembering and working through the sequence of steps required to solve a problem (so that steps may be repeated, performed out of order, or forgotten altogether). These students may also have problems doing mental calculations, estimating answers, and/or organizing a problem, especially a word problem.

A student’s confidence in his or her ability to be successful at mathematics adds another dimension to learning disabilities. Because math is a cumulative subject with new concepts building on previously acquired information, students who have memory difficulties or who never completely mastered specific math concepts may experience frustration and mounting anxieties. Teaching math requires that a great deal of information be presented in a short period of time. Students with learning disabilities may feel overwhelmed by the pace or feel they understand what is being taught only to realize they cannot generalize math concepts to homework assignments or test questions. Thus, math anxieties may cause a student to freeze during testing.

### ***Instructional Strategies***

Students with math disabilities and anxieties usually benefit from regular and frequent work with a tutor and clarification from the instructor, as needed. In some cases, SDS may recommend that the student be allowed to use extended time, a quiet room, and scrap paper for quizzes and tests. Additionally, you may:

- When writing a problem on the blackboard, state the problem orally.
- Use visual aids such as graphs and charts to accompany verbal explanation.
- Demonstrate how to check a problem for accuracy.
- Relate material to real-life examples.
- Explain your thought process in solving a problem.
- Connect new concepts to previously-learned material.
- Allow students to have a formula sheet to use during exams.
- Post solutions to problems on a class web-site.

### ***Foreign Language***

Students who have disabilities that relate to distinguishing, processing, remembering, and expressing sounds and words may find learning a foreign language problematic. To successfully master a second language a student must be able to:

- Hear and cognitively differentiate between the sound structure of words;
- Comprehend and remember the meanings of words and differing meanings when words are combined;
- Understand rules related to sentence structure and grammar;
- Retrieve information easily;
- Mentally manipulate information to successfully communicate verbally or in writing.

### ***Instructional Strategies***

- Use a multi-sensory approach
- Give sufficient time for oral practice
- Relieve or modify the pressure of timed responses (oral and written)

### ***Sequential Memory***

Other students you may work with will have learning disabilities that affect sequential memory tasks such as spelling, mathematics, and following step-by-step instructions. Students in this area benefit from learning how to break down tasks into smaller parts and from gaining clarity on how text authors and instructors organize material for learning. Giving many opportunities for evaluation, such as frequent quizzes, tests, and writing assignments, can help *all* students learn how to successfully organize their study, how to transfer learning from facts to application, and how to determine the level of detailed memorization needed. Tutoring may be required in more problematic areas. In general, the student with a learning disability—and in fact all students—benefit when a multi-modal approach to teaching and learning is used (seeing, hearing, saying and doing).

## ***Organization and Attention***

Success in college requires a reasonably sophisticated development of skills related to organization, focus or attention, and study. In addition to students with learning disabilities, people with AD/HD and Traumatic Brain Injury (TBI), may seem vulnerable or lacking in these skill areas. For instance, you may see from a student's participation in class discussions that he or she has completed the necessary reading and has a good grasp of course material. Yet the same student may misplace papers to be turned in or postpone starting projects so that the final product is rushed and less thorough than you would expect.

The delayed start of papers and projects may relate to poor estimation of how long it will take to complete the task. A student may appear to have reasonable organization and study skills but have difficulty understanding how much detail to focus on during lectures or while reading, writing, and preparing for tests. Some students also have problems screening out sights and sounds in the classroom to maintain focus on the class lecture. These difficulties can increase during longer lecture classes and peak stress times, such as during midterms and finals. ***It is important to note that for these problem areas to be termed as disabling they must meet criteria that go beyond mere developmental immaturity.***

Students who have learning disabilities that affect organization and attention often have difficulty completing open-ended, unstructured, and last-minute assignments. Therefore, they, like all students, can benefit from receiving a detailed syllabus that clearly states readings to be completed for each class period and gives due dates and clear descriptions for course papers and projects. Providing students with an outline of material to be covered for each class also helps them learn how to organize their listening, note taking, and studying. Some instructors make such outlines available at the beginning of each class, printed in a course pack, or available for downloading from the web so that students may spend more class time and attention understanding concepts and noting examples to aid memory.

## **General Recommendations**

### ***Individual Differences Awareness***

Keep in mind that no two students with learning disabilities are alike. Learning strategies and accommodations that work for one student may not work for another. Likewise, what works in one subject area or class format may not work in another. In general, students with learning disabilities will learn much better when more channels are used in the teaching/learning process—oral, visual, tactile, and kinesthetic.

### ***Conferences with Students***

When a student registers with Student Disability Services to request accommodations from faculty, we recommend that the student meet privately with the instructor to discuss the accommodations needed. This is a good opportunity for students to discuss their learning style and to ask for suggestions from the instructor for study approaches to the course material.

### ***Making a Referral***

If you are working with a student who seems to be struggling in your class but has not indicated that he or she has a learning disability, you may wish to refer the student to

Student Disability Services as well as to other learning resources on campus. However, do not assume that the student is learning disabled because they are struggling.

At this time, Cornell University does not have the resources available to diagnose disabilities, which places the responsibility for diagnostic evaluations on the student. SDS is, however, equipped to offer guidance to students as they begin the evaluation process.<sup>2</sup>

## **Instructional Strategies**

The following strategies are suggested to enhance the accessibility of course instruction, materials, and activities. They are general strategies designed to support individualized reasonable accommodations for students with specific learning disabilities.

### ***Classroom***

- When talking, be mindful of speed and audibility.
- Instructions should be presented both in written and oral formats.
- Allow the student to tape-record lectures.
- Assist the student with finding an effective note taker from the class.
- Provide handouts and visual aids.
- Use more than one way to demonstrate or explain information.
- Break information into small steps when teaching many new tasks in one lesson (state objectives, review previous lesson, summarize periodically).
- Allow time for clarification of directions and essential information.

### ***Papers***

- Provide examples of successful papers.
- Allow time for an early draft of the paper to be handed in for feedback.

### ***Tests and Exams***

- Suggest effective study strategies for the discipline.
- Provide study guides or review sheets for exams.

## **Typical Accommodations**

- Alternative print formats
- Written materials provided in electronic-text format
- Tape recording of classroom lectures
- Note takers
- Exam modifications
  - Extended time
  - Scribe

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<sup>2</sup> Adapted from University of Michigan with permission.  
<http://www.umich.edu/~sswd/faculty.handbook.6.html>

- Use of a computer for essay exams
- Alternative to Scantron forms
- Reduced-distraction test environment

## **BLINDNESS AND VISION IMPAIRMENTS**

### *Accessing Text and Visual Materials*

Students who have visual impairments have several options for accessing written text. These include the following:

- Recorded material
- A human reader
- A computer screen reader that reads text out loud
- Braille documents and books

To perceive non-textual material, students with visual impairments might use raised line drawings of diagrams, charts, and illustrations; relief maps; and/or three-dimensional models of physical organs, shapes, and microscopic organisms.

When printed text documents are scanned into a readable electronic format, they can be read by a synthesized voice output device or converted, as needed, into Braille or large print. SDS provides document-conversion services free of charge to the university community. Students are responsible for requesting conversion of their academic materials each semester.

### **Instructional Strategies**

The following strategies are suggested to enhance the accessibility of course instruction, materials, and activities. They are general strategies designed to support individualized reasonable accommodations for students with vision impairments.

#### ***General***

- Have copies of the syllabus and reading assignments ready four weeks prior to the beginning of classes to assist SDS with converting materials into alternate formats.
- If you know that you will be giving out handouts in class, try to provide them to the student with a visual impairment ahead of time. This allows them to have access to the content by the time class is held.
- Be flexible with deadlines if assignments are held up by the document-conversion process.
- When in doubt about how to assist the student, ask him/her.

#### ***Classroom***

- Keep a front row seat open for a student with a vision impairment. A corner seat is especially convenient for a student with a guide dog.
- Pace the presentation of material so that when referring to a textbook or handout, students have time to find the information.
- Like all students, students with visual impairments are responsible for the material covered in class. There are several different methods that can be used to take notes:
  - Recording the lecture
  - Asking a fellow student to use carbonless paper to take notes which are then

converted into large print

- Getting copies of the professor's notes, if appropriate
- Using a Braille device or laptop computer

### ***Visual Elements of a Lecture***

- Repeat aloud what is written on the board or presented on overheads and in handouts.
- When using PowerPoint, read the headings out loud to indicate where in the presentation the class is. When referring to an object on a slide, describe where in the slide it is.
- When working with a blackboard, diagrams, PowerPoint, an overhead projector or other visual materials, realize that precision in language is essential for the student with a visual impairment. If you point to the board and say, for example, "The heart is here" or "there," the student won't know where you are indicating. However, if you say, "The heart is in the upper middle of the chest to the left side," it is more accessible. "The sum of 4 and 7 is 11" is more accessible than saying, "The sum of this and that is 11."

### ***Evaluation***

Students with visual impairments will need tests and exams in alternate formats. The tests can be recorded, composed using software that can be read by a screen reader, such as Microsoft Word, or read aloud by the faculty member or a TA at another time.

### **Guide Dogs**

Some students with visual impairments work as part of a guide dog team, where both the handler and the dog have extensive training allowing them to navigate safely inside buildings and outside. For more information on how best to interact with working dogs, please refer to the etiquette guide in Section III (p. 39) or visit *Guide Dogs of America* at <http://www.guidedogsofamerica.org>. If a student with a guide dog is enrolled in one of your classes, you might consider sharing the interaction recommendations with your class at the beginning of the semester.

### **Typical Accommodations**

- Alternative print formats
- Magnification devices
- Adjustments in lighting
- Raised lettering
- Tactile cues
- Adaptive computer equipment
- Text conversion
- Recorded lectures
- Lab or library assistants
- Note taking

- Readers
- Library retrieval
- Transportation around campus
- Exam modifications
  - Extended time
  - Readers
  - Scribes
  - Adaptive equipment
  - Alternative formats such as Braille and enlarged print

## DEAFNESS AND HEARING IMPAIRMENTS

The causes and degrees of hearing loss vary across the deaf and hard-of-hearing community, as do methods of communication. Technology that has been developed to assist deaf and hard-of-hearing individuals by amplifying sounds includes hearing aids, FM systems, and cochlear implants. Hard-of-hearing students may use an Assistive Listening Device (ALD) in the classroom to enhance the voice of a speaker. The most common ALD is a personal FM system; the speaker wears a microphone and the student wears a receiving unit. Amplification devices provide auditory information (code) that cues the student about the spoken word. The student then has to take that code and try to interpret what was said. This technology is a tool to improve hearing but does not provide a level of hearing that is comparable to that of a non-disabled person.

Not all students who are deaf are fluent users of all of the communication modes used across the deaf community, just as users of spoken language are not fluent in all oral languages. The primary possibilities for communication include sign language, speech, lip reading and writing. For some suggestions on how to clearly communicate with someone with a hearing impairment, please see Section III.

### Sign Language Interpreting and Real-Time Captioning

Sign language interpreters and real-time captionists are professionals who facilitate communication between hearing individuals and people who are deaf or hard-of-hearing. The role of the interpreter is similar to that of a foreign language translator—to bridge the communication gap between two parties.

*Interpreters* translate spoken English into the visual-spatial languages of American Sign Language (ASL) and Signed English (SE). *Captionists* use specialized software to transcribe speech into typed text. The student with a hearing impairment watches a laptop display to visually follow the communication. The transcript that is created provides a written record of the class and may only be used by the student.

Interpreters' and captionists' responsibilities may include "voicing" responses for the student with a hearing impairment if the student is unable to communicate effectively on his/her own. Sometimes a student's accommodations will include both captioning and sign language interpreting.

It is helpful when working with deaf or hard-of-hearing students and their interpreters/captionists to speak directly to the students rather than to the professionals. You can speak at a normal speed, noting that there might be a lag time between the spoken message and the interpretation.

### Instructional Strategies

The following strategies are suggested in order to enhance the accessibility of course instruction, materials, and activities. They are general strategies designed to support individualized reasonable accommodations for students with hearing impairments.

#### *General*

- Allow a deaf student to work with audiovisual material independently and for a longer period of time.
- When possible, use captioned audiovisual materials.

## ***Classroom***

- Circular seating arrangements offer deaf or hard-of-hearing students the benefit of seeing all class participants. When desks are arranged in rows, keep front seats open for students who are deaf or hard-of-hearing and their interpreters.
- Face the class while speaking. If an interpreter is present, make sure the student can see both you and the interpreter.
- Replace such terms as “here” and “there” with more specific terms such as “on the second line,” “in the left corner” and “on page \_\_\_.”
- When mentioning a book, always refer to the page number being discussed and indicate where on the page a reference can be found. Leave time for the student with a hearing impairment to find the place because he/she cannot simultaneously flip to find a page and continue to be aware of what is said.
- In discussions, encourage students to raise hands and take turns. This makes it much easier for the interpreter, captionist, and student to identify the speaker.
- Repeat the comments and questions of other students and acknowledge who has made the comment so the deaf or hard-of-hearing student can focus on the speaker and/or know who has spoken.
- Pace discussions in such a way as to accommodate for the lag time needed for an interpreter to convey the material.
- If requested, assist the student with finding an effective note-taker from the class and/or provide the student with copies of your own notes.
- If there is a break in the class, get the deaf or hard-of-hearing student’s attention before resuming class.
- Because visual information is a deaf student’s primary means of receiving information, visual aids such as films, overheads, and diagrams are useful instructional tools.
- Write new terminology on the board or present it in a handout. This is helpful both for the student with the hearing impairment and for the sign language interpreter and captionist.

## **Typical Accommodations**

- Sign language or oral interpreters
- Note takers
- Captions for films and videos
- Real-time captioning of lecture material
- Exam modifications
  - The use of a computer for essay exams
  - Extended time
  - An interpreter may be needed to interpret test instructions or interpret the student’s questions during an exam.
  - Since English may be a second language for an ASL user, an interpreter may be needed for translation.

## Working with Captionists

There are two types of captionists at Cornell, CART providers and C-Print Captionists. Both provide real-time text-to-speech output. CART provides a word-for-word translation of what is said, whereas C-Print provides a “meaning-for-meaning” translation.

When working with a CART provider or a C-Print captionist, there are a few things you can do that will help the captionist provide better services for the deaf or hard-of-hearing student.

### *Speaking*

- Speak loudly, clearly, and at a moderate pace. Try not to go too quickly.
- If you are in a classroom that provides a microphone for the professor, please use it.
- Pause at logical moments in the class to give the captionist and student time to catch up. Remember, the student receiving captioning is reading the lecture rather than listening to it, and will almost certainly be a few sentences behind.
- If asking a question, give the deaf or hard-of-hearing student a moment to catch up and read the question before answering.
- Try not to speak with your back turned to the class. Be especially mindful of this when writing notes on the board. The deaf or hard-of-hearing student is probably lip reading at least some of what you are saying.
- When questions or comments are made by members of the class, repeat the question or comment before responding. The captionist may have difficulty hearing questions/comments.

### *Reading*

- Replace such terms as “here” and “there” with more specific terms such as “on the second line,” “in the left corner” and “on page \_\_\_.”
- When mentioning a book, always refer to the page number being discussed and indicate where on the page a reference can be found. Leave time for the student with a hearing impairment to find the place because he/she cannot simultaneously flip to find a page and continue to be aware of what is said.

### *Notes*

- Provide captionists with copies of your notes before each class, especially any new or specialized terminology you will be using.
  - Captionists build a “dictionary” of terminology specific to each class, and having the vocabulary ahead of time is preferable to trying to add specialized vocabulary while in the classroom.
  - Also, having a general idea of the subject matter being covered, even if it’s not a final draft of the information, makes it possible for the captionist to provide more accurate captioning.
- Provide a hard copy or online document of any material read aloud in class that’s not from an assigned textbook.
  - When reading from a book, speakers tend to use a speed far beyond the

ability of a captionist to keep up. Having a hard copy of what is read will ensure that the student receives a verbatim quotation in his or her final transcript, rather than a paraphrased “meaning-for-meaning” summary.

### ***Closed Captioning for Audiovisual (AV) Presentations***

An increasing number of educational videotapes as well as television broadcasts are being “closed captioned” for deaf and hard-of-hearing viewers. Closed captions are similar to subtitles in foreign language films. Captions appear at the bottom of the screen so the viewer may follow narration and dialogue. The main difference between the two is that closed captions include not only dialogue, but also non-dialogue audio information such as sound effects, and speaker identification.

For students who are deaf or hard-of-hearing, captions are vital to their understanding of audio-visual material. In-classroom captioning or sign-language interpreting of AV material is not sufficient to allow a deaf or hard-of-hearing student equal access to the material being presented. Captioning and interpreting cannot be provided quickly enough in the classroom to keep up with the rapid pace of most films and other AV material.

It is difficult for the viewer to follow a video and watch an interpreter or read captions on a separate screen at the same time. Reading lips is more difficult from a screen as well. Even students who can use lip-reading to follow a conversation will likely require captions when watching films or television.

**Note: It is extremely important to notify a student’s captionist/interpreter as soon as an in-class audio or video presentation has been planned.**

### ***Finding Captioned AV Materials***

When using AV materials in the classroom or as part of a homework assignment, make sure that they are captioned or that a transcript is available. To find out if a video is captioned, look for the “CC” symbol somewhere on the box, or for the phrase “subtitles for the hearing impaired.”

As a professor, you have more than one option for finding accessible AV to use in the classroom. If the video you were planning to show does not have captioning, consider replacing it with another video that does.

- PBS Nova has full episodes available to watch online with captions (QuickTime format only). Go to <http://www.pbs.org/wgbh/nova/programs/>.
- Another good online resource for captioned videos, which includes, among other things, a large selection of President Obama’s speeches, is available at <http://www.projectreadon.com/>.
- Very few YouTube videos are captioned. When showing a YouTube video in class, check first to see if it is captioned. To limit the results of a YouTube search to only videos with closed-captions, once a search has been performed click on the “Type:” drop-down menu and choose “Closed Captions.” This will refine the search to only videos that have been listed as having captions. *Note: Captions on YouTube videos are not always in English, so be sure and double-check before showing a video in the classroom.*
- An alternative to YouTube is Overstream (<http://www.overstream.net/>). Overstream is a website where volunteers caption YouTube and other online

videos. Their content does not necessarily overlap with YouTube, so it is worth checking both websites for video content.

- If all else fails, contact Student Disability Services at [sds\\_cu@cornell.edu](mailto:sds_cu@cornell.edu) with a captioning request. SDS will create an Overstream copy that can be shown in place of the YouTube video.
  - Captioning videos is labor-intensive, so please make any captioning requests as early as possible; at minimum, three days before the video will be shown in class. Last-minute requests may not be able to be accommodated.
  - Providing a transcript of the video to be shown will greatly expedite the captioning process.
  - It is possible to caption virtually any online video using the Overstream site. There are excellent tutorials at <http://www.overstream.net/help.php> (click on “Overstream Editor Tutorial” part 1 and 2).

### ***Using Captioned AV Materials***

Many video projectors used in Cornell classrooms do not have closed captioning decoders built in to them. However, many overhead projectors can display what is shown on a laptop screen. Common media programs, such as iTunes and Windows Media Player, can be set up to show captions while playing a DVD. These captions will be displayed through a projector if one is available. If there is a DVD alternative to a VHS tape, the DVD will offer a way to show a video with captioning.

- If a video is closed captioned but not available on DVD, a separate TV/VCR can be used instead of the classroom video equipment. Any TV available from Cornell should have a closed-captioning decoder built in.
- Whenever possible, replace VHS tape copies of films with captioned DVDs or online videos. The subject-appropriate library may be able to buy a captioned DVD copy of a video. Be sure to give the library several weeks’ notice to find out if such a purchase is possible, and to ensure that the video arrives in time.
- The Cornell Library website allows searching for materials held by Cornell as well as by other institutions. Cornell frequently updates its DVD holdings, often replacing or supplementing VHS videos. Check periodically for a DVD version of an older VHS tape.
- To search the Cornell Library for captioned media, use the phrase “video recordings for the hearing impaired” in a search of library holdings.
- Some institutions participate in Borrow Direct, which allows materials to be sent to Cornell from another institution. Even if Cornell does not hold a closed captioned DVD, the desired item may still be accessible through the library system using Borrow Direct. A regional public library may also have a captioned version of a film available to the community.

### ***If Captioned AV Materials are Unavailable***

In the event that closed captioning is not available, and there are no alternative videos available, it is possible for Student Disability Services to provide a transcript for a student to use in place of captions. This is a less than ideal solution, but it is still preferable to attempting in-class captioning of AV materials.

Obtaining a transcript is usually done by contacting the distribution company for the video and requesting a copy of the script. In order to figure out whom to contact, SDS will require as much information about the video as possible, including the full title of the movie and series (if applicable), the name of the director, the name of the production company or distribution company, the year the video was made, and any other potentially relevant information. Provide this information **as early in the semester as possible**.

If a transcript cannot be obtained, SDS will create a transcript of the media being used:

- Because creating a transcript is an extremely time-consuming process, it is vital to provide AV materials to SDS as early as possible. **Please provide any AV material that needs captioning at least 3 weeks before it is scheduled to be shown.**
- The student will need to read along with the video as it is being shown. When showing a non-captioned video, leave enough lights on in the classroom for the student to read by.

## CHRONIC MEDICAL CONDITIONS

Health-related disabilities are conditions affecting one or more of the body's systems. These include the respiratory, immunological, neurological, and circulatory systems. Students affected by health-related disabilities differ from those with other disabilities because their conditions are not static. As the condition changes, so may the need for accommodation.

### Types of Health-Related Impairments

There are many kinds of health-related impairments, varying significantly in their effects and symptoms. Below is a partial list of possible medical conditions and brief descriptions of some of the more common impairments experienced by students at Cornell.

|                         |                            |                          |
|-------------------------|----------------------------|--------------------------|
| AIDS                    | Disease/Impairments        | Muscular Dystrophy       |
| Allergies               | Fibromyalgia               | Narcolepsy               |
| Back Conditions         | Gastro-Intestinal Diseases | Repetitive Strain Injury |
| Cardiovascular Ailments | Heart Conditions           | Severe Asthma            |
| Chronic Pain            | Hemophilia                 | Sickle Cell              |
| Crohn's Disease         | Hepatitis                  | Traumatic Brain Injury   |
| Cystic Fibrosis         |                            |                          |

**Cancer** is a malignant growth that can affect any part of the body. Treatment can be time consuming, painful, and sometimes result in permanent disability. Students may miss a higher percentage of class during treatment. Chemotherapy may cause diminished cognitive functioning during the treatment phase.

**Chemical Dependency** is considered a disabling condition when it is documented that a person has received treatment for a drug or alcohol addiction and is not currently abusing. Chemical dependency can cause permanent cognitive impairments and carries with it a great deal of stigma.

**Diabetes Mellitus** causes a person to lose the ability to regulate blood sugar. People with diabetes often need to follow a strict diet and may require insulin injections. During a diabetic reaction, a person may experience confusion, sudden personality changes, or loss of consciousness. In extreme cases, diabetes can also cause vision loss, cardiovascular disease, kidney failure, stroke, or necessitate the amputation of limbs. Students may need to have food and drink in class and to leave class to take blood sugar measurement.

**Epilepsy/Seizure Disorder** causes a person to experience a loss of consciousness. Episodes, or seizures, vary from *petit mal*, or short absence, seizures to the less common *grand mal* seizures. Seizures are frequently controlled by medications and are most often not emergency situations. Students with seizure conditions may miss class the day after a seizure. They also may need testing accommodations because medications affect cognitive processing and seizures affect memory.

**Epstein Barr Virus/Chronic Fatigue Syndrome** is an autoimmune disorder that causes extreme fatigue, loss of appetite, and depression. Physical or emotional stress may adversely affect a person with this condition. Students may miss class more frequently because of illness. In class, students may need seats with cushions and testing accommodations because frequent breaks are needed to help manage fatigue.

**Human Immunodeficiency Virus (HIV+)** causes AIDS and inhibits one's ability to ward off illnesses and infections. Symptoms vary greatly. People with HIV or AIDS are often stigmatized.

**Lyme Disease** is a multi-health-related condition that can cause paralysis, fatigue, fever, dermatitis, sleeping problems, memory dysfunction, cognitive difficulties, and depression.

**Lupus Erythematosus** can cause inflammatory lesions, neurological problems, extreme fatigue, persistent flu-like symptoms, impaired cognitive ability, connective tissue dysfunction, and mobility impairments. Lupus most often affects young women.

**Multiple Chemical Sensitivity (MCS)** often results from prolonged exposure to chemicals. A person with MCS becomes increasingly sensitive to chemicals found in everyday environments. Cleaning products, pesticides, petroleum products, vehicle exhaust, tobacco smoke, room deodorizers, perfumes, and scented personal products can cause reactions. Though reactions vary, nausea, rashes, light-headedness, and respiratory distress are common to MCS.

**Multiple Sclerosis (MS)** is a progressive neurological condition with a variety of symptoms, such as loss of strength, numbness, vision impairments, tremors, and depression. The intensity of MS symptoms can vary. A person can be extremely fatigued one day and very strong the next day. Extreme temperatures can also adversely affect a person with MS. Students may miss class more frequently, need enlarged print handouts and additional time to complete assignments.

**Renal Disease/Failure** can result in loss of bladder control, extreme fatigue, pain, and toxic reactions that can cause cognitive difficulties. Some people with renal disease are on dialysis and have to adhere to a rigid schedule.

## **Instructional Strategies**

Health-related disabilities often require instructional strategies similar to those listed for other disabilities. The use of such strategies will depend on how the disability is manifested. If you would like more information about instructional strategies for students with health-related disabilities, please contact SDS at 254-4545, or e-mail Kappy Fahey at [kf75@cornell.edu](mailto:kf75@cornell.edu) or Michele Fish at [mdf6@cornell.edu](mailto:mdf6@cornell.edu). We welcome your questions.

## **Typical Accommodations**

- Conveniently located parking
- Note takers
- Extended time to complete a task
- Modified course or workload
- Flexibility with absence policy
- Exam modifications
  - Extended time
  - Reduced-distraction environment
  - Frequent breaks

## MOBILITY IMPAIRMENTS

Mobility impairments range in severity from limitations on stamina to paralysis. Some mobility impairments are caused by conditions present at birth while others are the result of illness or physical injury. Injuries cause different types of mobility impairments, depending on what area of the body is affected.

*Quadriplegia*, paralysis of the extremities and trunk, is caused by a neck injury. Students with quadriplegia have limited or no use of their arms and hands and often use electric wheelchairs. *Paraplegia*, paralysis of the lower extremities and the lower trunk, is caused by an injury to the mid-back. Students often use a manual wheelchair and have full movement of arms and hands. Below are brief descriptions of other causes of mobility impairments.

### Types of Mobility Impairments

**Amputation** is the removal of one or more limbs, and is sometimes caused by trauma or another condition.

**Arthritis** is the inflammation of the body's joints, causing pain, swelling, and difficulty in body movement.

**Back disorders** can limit a student's ability to sit, stand, walk, bend, or carry objects. They include, but are not limited to, degenerative disk disease, scoliosis, and herniated disks.

**Cerebral palsy** is the result of damage to the brain prior to or shortly after birth. It can prevent or inhibit walking and cause a lack of muscle coordination, spasms, and speech difficulty.

**Neuromuscular disorders** include a variety of diseases, such as muscular dystrophy, multiple sclerosis, and ataxia that result in degeneration and atrophy of muscle or nerve tissues.

### Additional Information

#### *Wheelchairs*

A person who uses a wheelchair is not "confined" to it, but rather uses it to get around, much as many of us walk. Wheelchairs come in a variety of sizes or styles and with various optional attachments. They can be manual or motorized. If students are unable to propel themselves a significant distance manually, they will use an electric wheelchair or scooter.

#### *Personal Space*

Individuals' wheelchairs and other mobility devices are essentially extensions of their bodies. Unless you are close friends with the individual, it is not appropriate to lean or hang on the chair.

### ***Relative Height***

When speaking with a person in a wheelchair or with short stature, consider kneeling or squatting so that you are at the person's eye level. This eliminates the need for the person in the wheelchair to tilt their heads back awkwardly for extended periods of time.

### ***Transportation***

For students with mobility impairments, transportation is provided by Student Disability Services in the form of free TCAT bus passes and the CU Lift service, which provides rides between campus buildings and campus housing units.

## **Instructional Strategies**

The following strategies are suggested to enhance the accessibility of course instruction, materials, and activities. They are general strategies designed to support individualized reasonable accommodations for students with mobility impairments.

### ***General***

- Make arrangements early for field trips and ensure that accommodations will be in place on the given day (e.g., transportation, site accessibility).
- Be flexible with deadlines. Assignments that require library work or access to sites off campus will consume more time for a student with a mobility impairment.
- Allow the student the same anonymity as other students (i.e., avoid pointing out the student or the alternative arrangements to the rest of the class).
- When in doubt about how to assist the student, ask him/her.

### ***Classroom***

- If necessary, arrange for a room change before the term begins.
- If possible, try not to seat wheelchair users in the back row. Move a desk or rearrange seating at a table so the student is part of regular classroom seating.
- Make sure accommodations are in place for in-class written work (e.g., allowing the student to use a scribe, to use assistive computer technology, or to complete the assignment outside of class).

### ***Physical Education***

Classes in kinesiology and recreation can almost always be modified so that the student in a wheelchair can participate. Classmates are usually more than willing to assist if necessary. Some students who use wheelchairs do not get enough physical exercise in daily activity, so it is particularly important that they be encouraged, as well as provided the opportunity, to participate.

## **Typical Accommodations**

- Note takers
- Accessible classroom/location/furniture
- Alternative ways of completing assignments

- Lab or library assistants
- Assistive computer technology
  - Screen-reading software
  - Voice-activated software
- Conveniently located parking or transportation assistance
- Exam modifications
  - Extended time
  - A scribe
  - Use of assistive technology

## PSYCHOLOGICAL DISABILITIES

Students with psychological disabilities experience chronic symptoms and have been treated professionally. With appropriate treatment, often combining medications, psychotherapy, and support, the majority of psychological disorders can be controlled.

The National Institute of Mental Health estimates that one in five people in the United States has some form of psychiatric disability, but only one in five persons with a diagnosable psychiatric disorder ever seeks treatment due to the strong stigmatization involved.

### Common Psychological Disabilities

Below are brief descriptions of some common psychological disabilities.

**Depression** is a major disorder that can begin at any age. Chronic depression may be characterized by a depressed mood for much of each day, a lack of pleasure in most activities, thoughts of suicide, sleep problems, and feelings of worthlessness or guilt. Depression is a variable condition that may fluctuate during a person's lifetime.

**Bipolar Disorder (Manic Depressive Disorder)** causes a person to experience periods of mania and depression. In the manic phase, a person might experience inflated self-esteem and a decreased need to sleep.

**Anxiety Disorders** can disrupt a person's ability to concentrate and cause hyperventilation, a racing heart, chest pains, dizziness, panic, and extreme fear.

**Schizophrenia** can cause a person to experience, at some point in the illness, delusions and hallucinations.

### Important Facts about Psychological Disabilities

- Trauma is not the sole cause of psychiatric disabilities; genetics may play a role.
- Psychiatric disabilities affect people of any age, gender, income group, and intellectual level.
- Disruptive behavior is not an attribute of most people with psychiatric disabilities.
- Eighty to ninety percent of people with depression experience relief from symptoms through medication, psychotherapy, or a combination of the two.

### Instructional Strategies

The following strategies are suggested to enhance the accessibility of course instruction, materials, and activities. They are general strategies designed to support individualized reasonable accommodations for students with psychological disabilities.

#### *General*

- Spend extra time with the student, when necessary, and assist the student with planning and time management.
- Clearly define course requirements, the dates of exams, and when assignments

are due; provide advance notice of any changes.

- When in doubt about how to assist the student, ask him/her.
- Allow the student the same anonymity as other students (i.e., avoid pointing out the student or the alternative arrangements to the rest of the class).

### ***Classroom***

- Allow the student to tape-record lectures.
- Assist the student with finding an effective note taker.

### **Typical Accommodations**

- Taped lectures
- Exam modifications
  - Extended time
  - Reduced-distraction test environment

## SPEECH AND LANGUAGE DISORDERS<sup>3</sup>

The term “Speech and Language Disorders” refers to problems in communication and related areas such as oral motor function. These delays and disorders range from simple sound substitutions to the inability to understand or use language or use the oral-motor mechanism for functional speech. Speech and language disorders may result from many different reasons including hearing loss, cerebral palsy, a learning disability, and traumatic brain injuries.

**Speech disorders** refer to difficulties producing speech sounds or problems with voice quality. They might be characterized by an interruption in the flow or rhythm of speech, such as stuttering, which is called dysfluency. Speech disorders may be problems with the way sounds are formed, called articulation or phonological disorders, or they may be difficulties with the pitch, volume or quality of the voice. There may be a combination of several problems. A student may say “see” when they mean “ski” or they may have trouble using other sounds like “l” or “r.”

**Language disorders** are impairments in the ability to understand and/or use words in context, both verbally and nonverbally. Some characteristics of language disorders include improper use of words and their meanings, inability to express ideas, inappropriate grammatical patterns, reduced vocabulary and inability to follow directions. One or a combination of these characteristics may occur in students who are affected by language learning disabilities or developmental language delay.

Although you may be uncomfortable listening to someone with a speech and language disorder, make the effort to speak and remember that “your discomfort is not their discomfort.” Make sure you let the individual with the speech disorder speak for him or herself. Do not finish sentences for them or assume you know what they are going to say.

At the same time, understand that a student with a communication disorder may be self-conscious and hesitant to participate in class. Try to pace discussion so that there is ample time and opportunity to participate.

### Instructional Strategies

The following strategies are suggested to enhance the accessibility of course instruction, materials, and activities. They are general strategies designed to support individualized reasonable accommodations for students with speech and language disorders.

- Let the student speak for him or herself, allowing for the time needed to do so.
- When speaking with a student whose speech is difficult to understand, don’t hesitate to ask for clarification, using writing when necessary.
- Allow the student the same anonymity as other students (i.e., avoid pointing out the student or the alternative arrangements to the rest of the class).
- When in doubt about how to assist the student, ask him/her.

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<sup>3</sup> Gregoria Barazandeh, “Disability Fact Sheet Handbook” at UC Irvine [http://www.disability.uci.edu/disability\\_handbook/Speech%20and%20Language/fact\\_sheet.html](http://www.disability.uci.edu/disability_handbook/Speech%20and%20Language/fact_sheet.html) Reprinted with permission.

## **Typical Accommodations**

Oral presentations may be a concern for students with speech impairments and their instructors. It is recommended that instructors openly discuss these concerns with the student and come up with adjustments to oral assignments, if needed. Listed below are several possibilities for alterations.

- Modifications of oral assignments including the use of a computer with a voice synthesizer or permitting the student to present directly to the faculty member in his or her office.
- Allowing substitutions for oral class reports, where the oral report is not fundamental to the class.
- Assigning group projects that allow the student to participate in a reduced capacity in the oral presentation.

## **Section IV: Communicating with People with Disabilities**

## SUGGESTIONS FOR MEETING PEOPLE WITH DISABILITIES<sup>4</sup>

- Most people who are disabled will not hesitate to ask for needed help and will be specific as to how it should be given; for example, a person who is blind usually prefers to take your arm rather than to have you hold his or hers. Offer assistance as you would to anyone else, for example, to push a wheelchair or to guide a person who is blind. The person will indicate whether or not the help is needed, and “No, thank you” must be respected.
- Always talk directly to a person who is disabled rather than to the person who may be accompanying him or her. Never talk about a person who is disabled to the person he or she is with as if the person does not exist. This includes an interpreter for a person who is deaf.
- Do not avoid using words like *blind* or *deaf* when associating with people with these disabilities. People with disabilities are aware of their disabilities and do not need to be shielded from the facts.
- When talking for any length of time to a person who uses a wheelchair, it is better to sit down in order to be at the same eye level. It is very tiring for a person to look up for a long time.
- Federal and state laws are in place to make new construction accessible to people with disabilities, but it is important to be aware of the architectural barriers in your building and consider accessibility when you plan to meet with students.
- Lip reading by persons who are deaf can be aided by being sure that the light is on your face and not behind you, and by taking all obstructions such as pipes, cigarettes or gum out of the mouth, keeping the lips flexible and speaking slowly. Additional communication could include body language, pantomime and gestures of all kinds and written communication if necessary.

### Speaking About People with Disabilities

Your portrayal of individuals with handicapping conditions can enhance their dignity and promote positive attitudes about their abilities. Let your descriptive words emphasize the person’s worth and abilities, not the disabling condition. Avoid references, phrases, and words that suggest restrictions, limitations, or boundaries because these phrases tend to carry stereotypes and contribute to discriminating attitudes. Even if a person with disabilities refers to him or herself in particular ways, using phrases like “confined to a wheelchair” reflects poor judgment on the part of the speaker or writer.

Refer to the people first rather than the disability. The phrase “people with disabilities” is preferred, for instance, over “the disabled” which tends to emphasize disability and to create the image of an unusual and homogeneous group. Here are some examples of people-first language:

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<sup>4</sup>Adapted from: *Serving Disabled People: An Informational Handbook for Libraries* by Ruth Velleman

***Affirmative phrases***

- Person who is blind; person who is visually impaired
- Person who is deaf; person who is hearing-impaired
- Person who has multiple sclerosis
- Person with epilepsy; person with a seizure disorder
- Person who uses a wheelchair
- Person who is unable to speak; nonverbal
- Successful, productive

***Negative phrases***

- The blind
- Suffers a hearing loss
- Afflicted by MS
- Epileptic
- Wheelchair-bound, confined to a wheelchair
- Dumb; mute
- Courageous (implies the person is a hero or martyr)

If you feel awkward about how to refer to a person with disabilities, your best bet may be to ask the person.

## **Suggestions for Interacting with Students with Vision Impairments**

- Some students with vision loss use canes or guide dogs for mobility purposes; however, many navigate without them. Like anybody, students with vision impairments appreciate being asked if help is needed before it is given. Ask a student if he/she would like some help and then wait for a response before acting.
- When entering a room, identify yourself to the student. When giving directions, say “left” or “right,” “step up” or “step down.” Convert directions to the vision-impaired student’s perspective.
- When guiding a student (into a room, for example), offer your arm and let him/her take it rather than pulling the person’s sleeve. If a person with a vision impairment uses a sighted guide, s/he generally holds the elbow of the guide.

## **Etiquette for Interacting with Service Dogs**

- Don’t touch, pet or feed a guide dog while she is wearing a working harness. Do allow the dog to concentrate and perform for the safety of her handler.
- Don’t call the dog by name. Do understand that, for safety reasons, some blind or visually impaired people will not reveal their guide dog’s name to a stranger.
- Don’t give the dog commands. Do allow the handler to do so.
- Don’t try to take control in situations unfamiliar to the dog or her handler. Do assist the handler upon his or her request, and always ask before you attempt to help.
- Don’t walk on the dog’s left side as she may become distracted or confused. Do walk on the handler’s right side, several paces behind him or her.
- Don’t attempt to grab or steer the handler while the dog is guiding him or her, and do not attempt to hold the dog’s harness. Do ask if the handler needs your

assistance and, if so, offer your left arm.

- Don't allow people to tease or abuse the dog. Do allow the dog to rest undisturbed and concentrate on her job.
- Don't allow pets or other dogs to challenge or intimidate a guide dog. Do allow them to meet when all animals can be carefully supervised.
- Don't pat the dog on the head. Do stroke the dog on the shoulder area—but only with her handler's approval.
- When speaking to the guide dog's handler, do address the person and not the dog.
- Sometimes a guide dog will make a mistake, and a correction is necessary to keep up the training. This could be a verbal reprimand or a leash correction. Handlers have been taught the proper and humane training techniques to maintain their dogs' working standards. You may not always hear it, but guide dogs get loads of praise when they do the right things.

## **Section V: Resources**

## Disability Rights

### **The Americans with Disabilities Act of 1990**

*<http://www.dol.gov/esa/regs/statutes/ofccp/ada.htm>*

### **The Americans with Disabilities Act of 1990, as amended 2008**

*<http://www.ada.gov/pubs/ada.htm>*

### **Section 504 of the Rehabilitation Act of 1973**

*<http://www.section508.gov/index.cfm?FuseAction=Content&ID=15>*

## Cornell University – For Students

### **Student Disability Services**

420 Computing & Communications Center

(607) 254-4545; [sds\\_cu@cornell.edu](mailto:sds_cu@cornell.edu)

### **Mathematics Support Center**

256 Malott Hall

(607) 255-4658

### **John S. Knight Institute for Writing in the Disciplines**

101 McGraw Hall

(607) 255-4061

### **Learning Strategies Center**

420 Computing & Communications Center

(607) 255-6310; <http://lsc.sas.cornell.edu>

## Cornell University – Faculty Information

### **Disabilities, Opportunities, Internetworking, and Technology (DO-IT)**

DO-IT Faculty Room

*<http://www.washington.edu/doi/Faculty/>*

## Captioning Videos

### **AccessIT**

NAD: A Promising Practice in Streaming Captioned Educational Video

*<http://www.washington.edu/accessit/articles?214>*

### **Captioned Media Program**

*<http://www.cfv.org/>*

## Universal Design

### **disABILITY Information and Resources**

*<http://www.makoa.org/accessable-design.htm>*

### **Disabilities, Opportunities, Internetworking, and Technology (DO-IT)**

Applications of Universal Design

*<http://www.washington.edu/doi/Resources/udesign.html>*

## **Web Accessibility**

### **Cornell University**

A Web Accessibility Primer: Usability for Everyone

*<http://www2.cit.cornell.edu/policy/webaccess/primer/>*

### **DO-IT**

Accessible Web Design

*<http://www.washington.edu/doi/Resourses/web-design.html>*

### **The Trace Research & Development Center, University of Wisconsin**

Designing More Useable Websites

*<http://trace.wisc.edu/world/web/#awsg>*

### **National Center on Accessible Information Technology in Education**

AccessIT Homepage

*<http://www.washington.edu/accessit/index.php>*

### **Equal Access to Software and Information (EASI)**

Barrier-free E-Learning Course Information

*<http://easi.cc>*

IT Trick and Tips Podcast Page

*<http://www.easi.cc/podcasts/bfit/bfit.htm>*

## **Workplace Accessibility**

### **Cornell University ILR School Employment and Disability Institute**

Homepage - *<http://www.ilr.cornell.edu/edi/index.cfm>*

Access for All - *<http://www.ilr.cornell.edu/ped/accessforall/>*