In recent years, the number of students diagnosed with disabilities who are attending postsecondary institutions has increased dramatically. Members of the largest group of students with disabilities have learning disabilities.

In most situations, a learning disability is not readily observable. Because there are no outward signs of a disability such as a white cane or wheelchair, students with learning disabilities are often overlooked or misunderstood. Some instructors and administrators suspect that students who claim to have learning disabilities are faking it, are playing the system, or lack the intelligence needed to succeed in college. Understanding the implications of learning disabilities, preparing to teach students with diverse characteristics, and learning to accommodate students with learning disabilities are essential for faculty and staff to provide academic and career opportunities for these students that are equivalent to those provided to their nondisabled peers.

Learning Disabilities/Functional Limitations
Generally speaking, students may be diagnosed with learning disabilities if they are of average or above-average intelligence and there is a significant discrepancy between their academic achievement and their intellectual ability. The diagnosis of a learning disability is often made by a psychologist trained in administering and interpreting psycho-educational assessments. Psychologists use the results of their assessments to understand how individuals receive, process, integrate, retain, and communicate information. Since these functions cannot always be directly observed, it is often difficult to diagnose specific learning disabilities, determine their impact, and recommend appropriate accommodations.

There are many types of learning disabilities; they often impact student abilities in one or more of the following categories:

- **Spoken language**—listening and speaking.
- **Written language**—reading, writing, and spelling.
- **Arithmetic**—calculation and mathematical concepts.
- **Reasoning**—organization and integration of ideas and thoughts.

Learning disabilities may also be present along with other disabilities such as mobility and sensory impairments, brain injuries, attention deficit disorder/attention-deficit hyperactivity disorder (ADD/ADHD), and psychiatric disabilities.

Described below are some of the functional limitations that may require accommodations. A student with a learning disability may have one or more of these limitations.

- **Auditory perception and processing**—the student may have difficulty processing information communicated through lectures or class discussions. He or she may have difficulty distinguishing subtle differences in sound or knowing which sounds to attend to.
- **Visual perception and processing**—the student may have difficulty distinguishing subtle differences in shape (e.g., the letters b and d), deciding what images to focus on when multiple images are present, skip words or repeat sections when reading, or misjudge depth or distance. He or she may have difficulty processing information communicated via overhead projection, through video, in graphs and charts, by email, or within web-based distance learning courses.
- **Information processing speed**—the student may process auditory and visual information more slowly than the average person. He or she may be a slow reader because of the need for additional time to decode and comprehend written material.
• Abstract reasoning—the student may have difficulty understanding the context of subjects such as philosophy and logic, which require high level reasoning skills.

• Memory (long-term, short-term)—the student may have difficulty with the storing or recalling of information during short or long time periods.

• Spoken and written language—the student may have difficulty with spelling (e.g., mixing up letters) or with speaking (e.g., reversing words or phrases).

• Mathematical calculation—the student may have difficulty manipulating numbers, may sometimes invert numbers, and may have difficulty converting problems described in words to mathematical expressions.

• Executive functioning (planning and time management)—the student may have difficulty breaking larger projects into smaller sub-projects, creating and following a timeline, and meeting deadlines.

• Include a statement in your syllabus inviting students to talk with you and the disability services office about disability-related issues.

• Point out campus resources available to all students such as tutoring centers, study skills labs, counseling centers, and computer labs.

• Clearly and early in a course define course requirements, announce the dates of exams, and tell students when assignments are due. Avoid last-minute readings or additional assignments and provide advance notice of changes in assignments and due dates.

• Provide printed materials early to allow students sufficient time to read and comprehend the material. Many students with learning disabilities find it beneficial to use software that can read the textbook and other text-based materials aloud. In order for them to take advantage of this technology, the printed text must first be converted into an electronic file. This process can be time-consuming.

• Use multi-modal methods to present classroom material in order to address a variety of learning styles and strengths (e.g., auditory, visual, kinesthetic). Provide important information in both oral and written formats.

• When teaching a lesson, state objectives, review previous lessons, and summarize periodically.

• Use more than one way to demonstrate or explain information.

• Read aloud what you write on the board or present on an overhead visual.

• Keep instructions brief and uncomplicated. Repeat them word-for-word.

• Allow time for clarification of directions and essential information.

• Use captioned videos and know how to turn on the captioning feature. Although captioned videos are typically used for students who are deaf, they also help some students with learning disabilities and those for whom English is a second language by ensuring content is presented visually and audibly. Give all students an opportunity to view a video multiple times (e.g., by making it available in a library or learning center, or on a website).

Universal Design

As the number of individuals being diagnosed with learning disabilities has increased, so have the understanding and utilization of academic and technological strategies for accommodation. There are a number of things instructors can do while planning a course to make it more accessible to all students, including those with learning disabilities. Proactively considering these strategies is part of a process called universal design (UD). UD offers the following suggestions:
• Provide study guides or review sheets.
• Have multiple methods for course assessment, such as allowing students to take an exam or writing a paper; work alone or in a group; or deliver an oral, written, or videotaped project presentation.
• Stress organization and ideas rather than mechanics when grading in-class writing assignments and assessments.
• Design distance learning courses with accessibility in mind. For example, avoid real-time chat sessions, because not all students can type quickly or accurately enough to fully participate.

Accommodations
Typically, a higher education institution requires that a student with a disability register with the office that provides support services for students with disabilities in order to receive accommodations. It is the student’s responsibility to request services in a timely manner. These offices confirm the student’s disability and eligibility for services and accommodations. A course instructor typically receives a letter from this office detailing recommended accommodations for a student. The student with a disability is responsible for meeting all course requirements using only approved accommodations.

The goal is to give the student with a disability equal access to the learning environment. Individualized accommodations are not designed to give the student an advantage over other students, to alter a fundamental aspect of the course, nor to weaken academic rigor.

A specific learning disability is unique to the individual and can be manifested in a variety of ways. Therefore, accommodations for a specific student must be tailored to the individual. The following are examples of classroom, assignment, and examination accommodations that may be recommended for a student with a learning disability. When in doubt about how to assist a student, work with the student privately or contact the campus office that provides support services for students with disabilities.

Classroom and Assignment Accommodations
You may be asked to
• assist the student in finding effective peer note-takers from the class. Alternatively, you could provide the student with a copy of your lecture notes or outline.
• allow the student to tape record lectures.
• allow the student additional time to complete in-class assignments, particularly writing assignments.
• provide feedback and assist the student in planning the workflow of assignments. This is especially important with large writing assignments. It may be helpful to break the larger assignment into smaller components with opportunities for draft feedback.
• provide assistance with proofreading written work.

Examination Accommodations
You may be asked to allow the student with a learning disability
• extended exam time, typically time and one half to double time.
• to take exams in a room with reduced distractions.
• the assistance of a reader, scribe, or word processor for exams.
• the option of an oral exam.
• to use spelling and grammar assistive devices for essay exams.
• to use a calculator for exams.
• to use scratch paper during exams.

Additional Resources
Your campus student disability support office is a valuable resource for better understanding learning disabilities and effective instructional strategies. The following resources may also be helpful:

The Center for Universal Design in Education is a comprehensive resource on the principles, processes, and strategies for applying UD in academic settings.
www.uw.edu/doit/CUDE/
The Faculty Room is a space for faculty and administrators at postsecondary institutions to learn about how to create classroom environments and activities that maximize the learning of all students, including those with disabilities. www.uw.edu/doit/Faculty/Resources/

Invisible Disabilities and Postsecondary Education is the title of both a video and a publication that includes suggestions for working with students with invisible disabilities on postsecondary campuses. www.uw.edu/doit/Video/invisible.html

Equal Access: Universal Design of Instruction is the title of both a video and a publication that provides postsecondary instructors with strategies for making campuses welcoming and accessible to all students. www.uw.edu/doit/Video/ea_udi.html

LDOnline is a comprehensive website on learning disabilities for parents, teachers, and other professionals. www.ldonline.com

The Learning Disabilities Association of America, (LDA) is a nonprofit grassroots organization whose members are individuals with learning disabilities, their families, and professionals who work with them to advance the education and general welfare of children and adults with learning disabilities. www.ldanatl.org

DO-IT videos (www.uw.edu/doit/Video/) cover a wide variety of relevant topics, including the following titles:

Building the Team: Faculty, Staff, and Students Working Together
Equal Access: Universal Design of Instruction
Invisible Disabilities in Postsecondary Education
Working Together: Computers and People with Learning Disabilities

About DO-IT
DO-IT (Disabilities, Opportunities, Internetworking, and Technology) serves to increase the successful participation of individuals with disabilities in challenging academic programs such as those in science, engineering, mathematics, and technology. Primary funding for DO-IT is provided by the National Science Foundation, the State of Washington, and the U.S. Department of Education.

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Acknowledgment
The contents of this publication were developed under grants from the U.S. Department of Education, #P333A020044 and #P333A050064. However, these contents do not necessarily represent the policy of the U.S. Department of Education, and you should not assume endorsement by the federal government.

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