

**COE 6323**  
**Computer Access Technology**  
**for Persons who are Visually Impaired**  
**COURSE SYLLABUS**  
Summer, 2008

**Course Credit:** 3 semester hours

**Class Schedule/Location:** First Half – Distance Education  
Second Half - Campus 150 IED Building

**Course Objectives:** This course will provide students with a basic knowledge of various access technology devices used by individuals with visual impairments. The course allows for practice with various types of equipment, an introduction to tactile equipment, note-taking devices, large print equipment/software, and speech systems software.

1. Understand the role of the technology specialist.
2. Become familiar with current and past research regarding computer access technology.
3. Understand differences between various operating systems.
4. Become aware of speech synthesis equipment.
5. Become aware of tactile equipment.
6. Become aware of large print equipment.
7. Become aware of Braille output equipment.
8. Be able to organize assistive technology resources for future use.
9. Be able to evaluate access software and its capabilities with specific populations.
10. Be able to develop an individualized technology plan.
11. Know how to perform a job analysis specific to assistive technology.
12. Become familiar with funding resources, options, and grant writing specific to assistive technology.

**Important Notes for Success:**

- Please take the time to read through the entire syllabus so that you will understand the way the course works, and what your responsibilities will be to complete the course successfully. If you have questions that are already answered in the syllabus, it will show us that you have not taken the time to read through it carefully.
- It will be very important that you have a Mississippi State University

email address to use for the course. Your logon information including user id and password will be sent to you prior to the course beginning. You should take the time to be sure you are able to access email and the webpage with your MSU logon.

- When sending email correspondence or inquiries about assignments related to the course, please use your university email address and put COE 6323 in the subject line, along with any other information you would like to add. Because of large volumes of spam, we cannot guarantee your email will be received otherwise.
- You will be signed up for a listserv (email discussion group) that will be used for the class. Questions will be posted by your instructor (BC Starkson) and will be graded on your level of discussion in response to the questions. It is important that all emails sent to the listserv (to complete the discussion part of the class) be sent to [vsp-list@lists.msstate.edu](mailto:vsp-list@lists.msstate.edu). Again, you will be signed up for the listserv with your MSU email address. Other email addresses will not be allowed to post to the listserv. Please remember to put COE 6323 in the subject line.
- The course moves very quickly with significant amounts of material to be covered. Please keep up with all reading, and project assignments. You might even want to start reading before the class begins. If you have difficulty with anything, contact us immediately, so that we can help before you lag behind. It will be difficult to catch up. Without prior approval, late assignments and quizzes will not be accepted.
- If you have special access needs because of any disabling condition, please be sure that these are addressed adequately before the course begins. Large print users are encouraged to also have audio access to Textbooks. If you need special accessibility or testing arrangements when you are on campus, please let us know early.
- All papers should be in written in APA research style. If you do not have access to an APA Publication Manual, fifth edition, check out the website APA Research Style Crib Sheet at [www.wooster.edu/psychology/apa-crib.html](http://www.wooster.edu/psychology/apa-crib.html). If you have difficulty finding an APA Manual, and you would like to buy one, it is available at <http://apastyle.apa.org/>

### **Topics to be Covered:**

1. A study of rehabilitation engineering issues including legislation and research.
2. A review of computers and operating systems.
3. An overview of various types of access technology, including voice synthesizers, tactile equipment, Braille equipment, and large print

- equipment.
4. An overview of computer graphics and their ability to interface with assistive technology/software.
  5. A study of issues relating to access technology, i.e. interfacing compatibility, and accessories.
  6. A study of how to evaluate access software.
  7. A study of how to develop an individualized technology plan.
  8. A review of job analysis techniques.

### **Student responsibilities:**

1. Have appropriate computer access for the Distance Education component of the class, including knowledge of Word Processing, email capability and Internet Access, as well as competency with any assistive technology needed by the student.
2. Attend class, on time, regularly and actively participate in all classroom activities and on-line discussions.
3. Read and complete assignments prior to class.
4. Complete all assignments and submit according to the schedule indicated in the Schedule of Classes and Assignments.

### **The Instructional team:**

The Project Director and Instructor of Record for the Course is Ms. B.J. LeJeune 662-325-2694, [bjlejeune@colled.msstate.edu](mailto:bjlejeune@colled.msstate.edu). However, B.C. Starkson will be the actual Instructor for activities in the class. He will be responsible for grading assignments and tests. Most of your course interactions will be with him.

### **Course Schedule:**

### **PART I: The Distance Education Component**

**Starting date:** Monday, January, 2008  
**Conference Call:** 2:00 PM CST Conference Call  
**Call In Number:** TBA

**Everyone is expected to call into the toll free number at the above time for orientation to the course. If for some reason you are unable to make it, please contact BJ LeJeune at 662-323-2694 or by email at [bjlejeune@colled.msstate.edu](mailto:bjlejeune@colled.msstate.edu) prior to the scheduled date. If you have difficulty getting through you may contact the office at 662-325-2001 or toll free at 1-800-675-7782, and someone will assist you.**

### On-Line Class Units

Unit 1: Introduction to Computers and Basic Computer Literacy

Unit 2: Operating Systems

A. PC

B. Mac

C. Other

Unit 3: Overview of Computer Accessibility and Installation

A. Tactile Systems

B. Magnification Systems

C. Speech Systems

Unit 4: Job Analysis considerations for use of Computer Access Technology

Unit 1: Introduction to Blindness Rehabilitation

Reading Assignments:

1. AT Notebook (available on-line)

Chapter 1, Appendix A, B, and C.1

2. Vocabulary Sheet

Quiz #1 Week 1

Chat Room Discussion Date TBA

Unit 2: Operating Systems

Reading Assignments:

1. Notebook Articles: Appendices C.2, D, and E

2. Chat Room Discussion Date TBA

Quiz #2: Week 2

Chat Room Discussion: Date TBA

Unit 3: Overview of Computer Accessibility and Installation

Reading Assignments:

1. Notebook Articles: Appendices F, G, and H

2. Chat Room Discussion: Date TBA

Quiz #3: Week 3

Resources File Assignment: Begin working on a Resource File of various types of assistive technology. See specifics of what should be included on the Resource File assignment sheet.

Unit 4: Overview: Job Analysis considerations for use of Computer Access Technology

Reading Assignments:

1. Notebook Articles: Appendices I, J, and K

## 2. Chat Room Discussion: Date TBA

### Quiz #4: Week 4

Job Analysis Project 1: Identify a job uses computers in your community, and make arrangements to interview someone doing that job. Write a 4-6 page descriptive job analysis of the position, and describe the essential job elements, optional job elements, qualifications for the position, and any accessibility issues that might require modification for a person with a visual impairment using large print, braille or speech systems. Indicate whether or not you see this position as feasible for a person with a vision loss.

### **PART 2: Welcome to Bulldog Country Starts April, 2007 8:30 in the Industrial Education Building, Room 152**

#### **Day 1 Assignments: Notebook Readings on Magnification Technology and Large Print Graphics**

8:30 Welcome and Introductions to meet both staff and students

9:00 Introduction to the Computer Lab on Campus

10:00 Hands-on Demonstrations of Magnification Technology Including conducting a CCTV assessment

12:00 Lunch

2:00 Vendor Demonstrations of Various Access Technology  
Ron Thompson, Adaptive Solutions

4:00 Group Assignment meetings for Technology Plan Assignment

#### **Day 2 Assignment: Notebook Readings on Speech Technology and Audio Description**

8:30 Hands-on Demonstrations of Speech Technology

10:30 Developing an Assessment of most Appropriate Technology to do the Job

12:00 Lunch

1:30 Vendor Demonstrations of Various Access Technology

Mike Self, Freedom Scientific

4:00 Group Assignment meetings for Technology Plan Assignment

**Day 3 Assignment: Notebook Readings on Braille Technology And Tactile Graphics, OCR Readings and Media Assessment Techniques**

8:30 Hands-on Demonstrations of Braille Technology and Stand alone Braille PDA's

10:30 Optical Character Recognition

11:30 Working with Consumers requiring Technology in More than one Media Format

12:00 Lunch

1:30 Vendor Demonstrations of Various Access Technology

4:00 Group Assignment meetings for Technology Plan Assignment

**Day 4 Assignment: Notebook Readings The Internet, Email, Chat Rooms, etc.**

8:30 Using the Internet with Computer Access Technology: Challenges and Solutions

10:30 E-Mail, Chat Rooms, Listservs, Bulletin Boards and Search Engines

12:00 Lunch

1:30 Vendor Demonstrations of Various Access Technology  
Jim Sullivan, Humanware

4:00 **Resource File Due**  
Group Assignment meetings for Technology Plan Assignment

**Day 5**

8:30 Shopping On-Line, Pros & Cons for People who are Blind.

9:30	Using Technology for Bill Paying on-line
10:00	Technology Plan Assignment Presentations
12:00	Lunch
2:30	Protecting Your System: Anti-Virus, Firewalls, and Spy Ware
3:30	Comprehensive Final Exam (includes information from the on-line portion of the class)

**Method of instruction:** On-line and In Class lectures, discussion and readings, including audio-visuals.

**Method of evaluation:** Students will be given the following assignments:

**Method of instruction:** A variety of lecturers will be used in various presentations. A representative from several software/technology companies will be brought in for product demonstrations and lecture time. Students will also take part in two role-playing demonstrations. A job analysis activity will also be assigned in which students must interview someone on campus for job information relevant to a “sample consumer.”

**Method of evaluation:**

**Possible Points**

Quizzes (10 points each)	50
Job Analysis Assignment	100
Resource Notebook Assignment	100
Group Access Technology Plan	50
Access Technology Final Exam	<u>100</u>
	400

**Grading Criteria:**

- A= 373-400 points
- B= 345-372 points
- C= 317-344 points
- D= 289-316 points
- F= 288 points or below

**Required texts:**

Moore, J.E., Graves, W.H., & Patterson, J.B. (1997). *Foundations of Rehabilitation Counseling with Persons who are Blind or Visually Impaired*. New York: AFB Press.

Various Handouts found in the overall Vision Specialist Access Technology notebook.

**Other Resource Material:**

American Foundation for the Blind Press Publication Catalog  
Independent Living Aids Product Catalog  
L S & S Catalog  
Maxi-Aids Product Catalog

**Accommodations:**

Students needing special accommodations because of a disability have the responsibility for making the instructor(s) aware of their specific needs. The instructor(s) will gladly attempt to make reasonable and appropriate accommodations.

**ACADEMIC HONESTY:**

The academic honesty policies of Mississippi State University will be adhered to in this class. Grades earned by dishonest means devalue those earned by other students. It is important that students are aware of and adhere to the University's policy on academic integrity. Academic dishonesty involves acts that may undermine or compromise the integrity of the educational process.