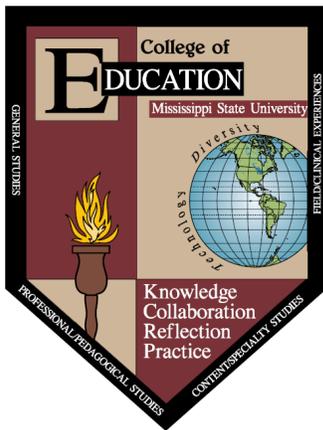


**MISSISSIPPI STATE UNIVERSITY
COLLEGE OF EDUCATION**

**DEPARTMENT of COUNSELING and EDUCATIONAL PSYCHOLOGY
COURSE SYLLABUS**

Course Prefix & Number:	COE 6323
Course Title:	Sensory Aid Technology
Credit Hours:	Three (3) semester hours
Type of Course:	Lecture
Catalog Description:	Survey of sensory devices includes practice with computer assistive devices designed to enhance employment and communication skills of persons with visual impairments.

College of Education Conceptual Framework:



The faculty in the College of Education at Mississippi State University are committed to assuring the success of students and graduates by providing superior learning opportunities that are continually improved as society, schools, and technology change. The organizing theme for the conceptual framework for the College of Education at Mississippi State University is educational professionals - dedicated to continual improvement of all students' educational experiences. The beliefs that guide program development are as follows:

1. **KNOWLEDGE** - Educational professionals must have a deep understanding of the organizing concepts, processes, and attitudes that comprise their chosen disciplinary knowledge base, the pedagogical knowledge base, and the pedagogical content knowledge base. They must also know how to complement these knowledge bases with the appropriate use of technology.
2. **COLLABORATION** - Educational professionals must continually seek opportunities to work together, learn from one another, forge partnerships, and assume positions of responsibility.
3. **REFLECTION** - Educational professionals must be willing to assess their own strengths and weaknesses through reflection. They must also possess the skills, behaviors, and attitudes necessary to learn, change, and grow as life-long learners.
4. **PRACTICE** - Educational professionals must have a rich repertoire of research-based strategies for instruction, assessment, and the use of technologies. They must be able to focus that array of skills on promoting authentic learning by all students or clients, while exhibiting an appreciation and commitment to the value and role of diversity.

Course Objectives:

This course will provide students with a basic knowledge of various computer access technology devices used by individuals with visual impairments. Information acquired in the course will build on the knowledge of general studies to allow the student to analyze job situations, recommend appropriate Assistive Technology solutions, write appropriate reports and function as a team member in finding solutions to complex issues that prevent persons who are blind and visually impaired from entering the job market. 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. The College of Education operates under a set of College Framework Program Outcomes (CFPO) with specified educational outcomes for each course and each course objective. The CFPO outcome is listed next to the course objective.

The student will:

1. Understand the role and function of the Assistive Technology Specialist. (CFPO 9)
2. Become familiar with current and past research regarding computer access technology for persons with vision loss. (CFPO 13)
3. Understand differences between various operating systems and the related impact on accessibility. (CFPO 3, 4)
4. Become knowledgeable of speech synthesis computer access technology. (CFPO 7)
5. Become knowledgeable of tactile computer access technology. (CFPO 7)
6. Become knowledgeable of large print and magnification computer access technology. (CFPO 7)
7. Become knowledgeable of Braille embossing systems. (CFPO 7)
8. Organize Assistive Technology resources for future use. (CFPO 7)
9. Evaluate access software and its capabilities with specific populations. (CFPO 4)
10. Develop an individualized Assistive Technology plan. (CFPO 10)
11. Demonstrate competency in conducting a job analysis specific to assistive technology. (CFPO 10)
12. Demonstrate knowledge of funding resources, options, and grant writing specific to assistive technology. (CFPO 9)

Topics to be Covered:

1. A study of rehabilitation engineering issues including legislation and research. (2 hrs.)
2. A review of computers and operating systems. (3 hrs.)
3. An overview of various types of access technology, including voice synthesizers, tactile equipment, Braille equipment, and large print equipment. (20 hrs.)
4. An overview of computer graphics and their ability to interface with assistive technology/software. (5 hrs.)
5. Issues relating to access technology, i.e. interfacing compatibility and accessories. (3 hrs.)
6. How to evaluate access software. (3 hrs.)
7. How to develop an individualized technology plan. (7 hrs.)
8. Review of job analysis techniques. (2 hrs.)

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.

Because of the fast moving nature of technology, the instructor will provide each student with an Assistive Technology Notebook of articles, information, and resources.

Methods of Instruction:

Lecture, on-line discussion, and face-to-face hands-on lab experiences

Suggested Student Activities:

1. Students will actively participate in all classroom activities and on-line discussions.
2. Students will complete an Assistive Technology Plan
3. Students will develop an extensive resource file of Assistive technology resources
4. Complete all assignments and submit according to the schedule indicated in the Schedule of Classes and Assignments.

Honor Code:

Mississippi State University's honor code describes specific policies and procedures for enforcing academic honesty at the university. You will be required to electronically sign your acceptance of the MSU Honor Code, specifically, the Honor Code, which (<http://www.honorcode.msstate.edu/>) reads:

“As a Mississippi State University student I will conduct myself with honor and integrity at all times. I will not lie, cheat, or steal, nor will I accept the actions of those who do.”

You will be asked to sign an Honesty statement indicating that you have not cheated on any of the proposed assignments or tests.

Technology:

You will need a PC or Mac computer with access to high speed internet. Your computer browser must be supported and configured properly for MyCourses using the Check Browser feature. Most of the problems you will encounter will be corrected if you do this before the class starts. It is recommended that you have at least Windows 7 for your PC, although XP may work. The university is no longer supporting XP, so there may be occasional problems. Common recommendations for browsers are FireFox 7.01, Chrome 31.0 and Internet Explorer 9.0 or better for your PC and the latest version of Safari for your Mac. Unfortunately some functions work better with different browsers, so you may want to have at least two browsers available for use on your PC. Additionally you will need the following:

1. Quicktime player can be downloaded at <http://www.apple.com/quicktime/download/>
2. Adobe Acrobat (if you use a screen reader, you may need the full program)
3. If you will be accessing the program from a state employment site, pre-check your

firewall clearances to be sure you can freely surf the web and download materials and accept email attachments.

Your computer will be used for producing and turning in assignments, participating in on-line discussions, viewing audio and visual files that contain lectures and Power Point presentations, and researching materials in the MSU Library and on the Internet.

Diversity:

Throughout the course diversity will be respected and appreciated. Technology is often a great equalizer for persons with disabilities and the relationship will be addressed. The entire course is related to working with persons who are blind and visually impaired and using technology to make them more competitive in the job market.

Disability:

Students needing special accommodations because of a disability have the responsibility for making the instructor aware of their specific needs. The instructor will gladly make reasonable and appropriate accommodations. If you have need of accommodations in addition to what is supplied through the class, the Student Support Services office may be available to assist you at 662-325-3335. However, it is strongly recommended that you check with your instructor first as most accommodations including testing and access to printed materials as well as orientation to the physical area are provided through the class.

Field Component:

The class does not have a field component.

Evaluation of Student Progress:

Students will be graded on the following assignments:

Quizzes (10 points each)	50
Job Analysis Assignment	50
Resource Notebook Assignment	100
Group Access Technology Plan	100
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

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 login information including Netid 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 login.
- 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 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 . 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, sixth edition, check out the website APA Research Style Crib Sheet at 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/>

Bibliography:

Hersh, M. A. & Johnson, M. A. (2008). *Assistive technology for visually impaired and blind people*. Springer Science-Business Media.

Holton, B. (2014). Evaluating the accessibility of the Microsoft Surface Pro 2 using Narrator. *Access World*. 15,2. Retrieved: <http://www.afb.org/afbpress/pub.asp?DocID=aw150203>

Kelly, S. M. & Smith, D. (2011). The impact of assistive technology on the educational performance of students with visual impairments: A synthesis of the research. *Journal of Visual Impairment & Blindness* 105, 2, 73–83.

Kelly, S. M. (2011). The use of assistive technology by high school students with visual impairments: A second look at the current problem. *Journal of Visual Impairment & Blindness* 105, 2, 73–83.

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Blindness 105, 4, 235–239.

Presley, I., & D’Andrea, F. M. (2009). Assistive technology for students who are blind or visually impaired: A guide to assessment. New York: AFBPress.

Wunder, G. (2013). Section 508 and the blind: One more battle in the fight for equality in the workplace. *Braille Monitor 56*, 5 241–248.

COE 6323: Class Schedule

PART I: The Distance Education Component (65%)

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 662-325-2694 or by email at 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

Unit 3: Overview of Computer Accessibility and Installation

A. Tactile Systems

B. Magnification Systems

C. Speech Systems

Unit 4: Role of the Assistive Technology Specialist, Job Analysis considerations for use of Computer Access Technology, and Internet Issues

Unit 1: Audio Lecture: Introduction to Computer Technology for Persons with Vision Loss, lecture week 1.mp3

Reading Assignments:

1. Information from week 1 on CD.

Quiz #1 Week 1

Unit 2: Audio Lecture: Operating Systems, lecture week 2.mp3

Reading Assignments:

1. Information from week 2 on CD.

Quiz #2: Week 2

Unit 3: Audio Lecture: Overview of screen readers and OCR, lecture week 3.mp3

Reading Assignments:

1. Information from week 3 on CD.

Quiz #3: Week 3 Speech Systems, OCR Systems

Unit 4: Magnification Systems, Tactile Systems, lecture week 4.mp3

Reading Assignments:

1. Information from week 4 on CD.

Quiz #4: Week 3 Speech Systems, OCR Systems

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 5: Audio Lecture: Overview: Job Analysis considerations for use of Computer Access Technology, lecture week 5.mp3

Reading Assignments:

1. Information from week 5 on CD.

Quiz #5: Week 5

Job Analysis Project 1: Identify a job that 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, Tactile, or screen readers. Indicate whether or not you see this position as feasible for a person with a vision loss.