COE 6323: Sensory Aid Technology
(Assistive Technology for those with Vision Loss)

Course Credit: 3 semester hours

Course Type: Distance Education, Lecture & Discussion

Catalog Description: Survey of assistive technology for people with vision loss. Includes practice with computer and other assistive devices designed to enhance employment and independent living skills of persons with visual impairments.

Class Schedule/Location: First 5 weeks—Distance Education
Final week (April 24 - 28) — On Campus

Course Objectives: This course will provide students with a basic knowledge of various computer and stand-alone assistive technology (AT) 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 AT 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, electronic magnification, screen magnification software, text to speech software and accessibility features on tablets and smart phones. 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 Professional (ATP). (Collaboration)
2. Become familiar with current and past research regarding AT for persons with vision loss. (Research)
3. Understand differences between various operating systems and the related impact on accessibility. (Knowledge and Assessment)
4. Become knowledgeable of text to speech software. (Technology)
5. Become knowledgeable of tactile computer access technology. (Technology)
6. Become knowledgeable electronic magnification and screen magnification software. (Technology)
7. Become knowledgeable of Braille embossing systems. (Technology)
8. Organize AT resources for future use. (Technology)
9. Evaluate access software and its capabilities with special populations. (Assessment)
10. Develop an individualized AT plan. (Problem-Solving)
11. Demonstrate competency in conducting a job analysis specific to AT. (Problem-Solving)
12. Demonstrate knowledge of funding resources, options, and grant writing specific to AT. (Collaborations)

Topics to be Covered: 48 hours
1. An overview of the history of AT including legislation, definitions and AT professionals. (2 hrs)
2. An overview of AT evaluation, assessment, recommendations, and reporting. (5 hrs)
3. An overview of various types of access technology including AT software (text to speech, screen magnification, Braille translation, OCR), electronic magnification, stand alone OCR devices, iOS/Android accessibility features and apps, and Braille technology (notetakers, refreshable displays, embossers. (30 hrs)
4. An overview of AT training, and funding resources. (5 hrs)
5. Special Populations and AT. (2 hrs)
6. Review of job analysis techniques. (2 hrs)
7. Emerging trends and technologies. (2 hrs)

Required texts:

Methods of Instruction: Lecture, on-line discussion and hands-on lab experiences.

Suggested Student Activities:
1. Students will actively participate in all classroom activities and on-line discussions.
2. Students will complete one expository essay.
3. Students will develop an AT resource file while on campus.
4. Students will complete a group project (case study / job analysis / AT evaluation with recommendations) while on campus.
5. Complete all assignments and submit according to the schedule indicated.

The Instructors
The primary instructor for the course is Cheryl Saucier 662-312-8411 or cherylvisionrehab@gmail.com and B.J. LeJeune 662-325-2694 or bjejeune@colled.msstate.edu will be the on-campus contact.

Honor Code: Mississippi State University’s honor code describes specific policies and procedures for enforcing academic honesty at the university. Please review the policy at http://www.msstate.edu/dept/audit/1207.html. You will be required to electronically sign your acceptance of the MSU Honor Code. Specifically, the Honor Code (http://www.students.msstate.edu/honorcode/) 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 Requirements: 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. 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.

Method of Evaluation: Students will be graded on the following assignments:

5 Quizzes 50
5 On-line discussion questions 50
Group AT Project (on campus assignment) 50
Resource Notebook Assignment (on campus assignment) 50
Expository Essay 100
Comprehensive Final Exam 100

Grading Criteria:

Point Distribution:
A= 400 - 360 points
B= 359 – 320 points
C= 319 – 280 points
D= 279 – 240 points
F= 239 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.
• 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


COE 6323: Class Schedule

PART I: The Distance Education Component

Week of March 20: Unit 1 Activities

• Online PowerPoint + lecture
• Listserv Discussion Question #1 posted March 20 / due March 26 by midnight
• Readings
  Chapter 1 from Assistive Technology text book
  Tech Act handout
  AT Definitions handout
  ACVREP handout
• Quiz March 26 by midnight

Unit 1 Content: Part 1
Introduction to Assistive Technology
  Definition
☐ History of Profession
☐ Legislation
☐ Professionals
  o Certifications
    • RESNA
    • ACVREP
    • CSUN
  o Degrees

Unit 1 Content: Part 2
Purposes for AT for people with vision loss
  ☐ Independent Living
  ☐ Communication
  ☐ Access to computer / internet
  ☐ Way finding
  ☐ Leisure and Recreation
  ☐ Education
  ☐ Employment

Week of March 27: Unit 2 Activities

• Online PowerPoint + lecture
• Listserv Discussion Question #2 posted March 27 / due April 2 midnight
• See MyCourses for readings
• Quiz 2 April 2 by midnight

Unit 2 Content: Part 1
Assessment and Training
• AT assessment using HAAT model
• AT training
  o AT (tech act) center
  o B/VI rehabilitation center
  o Independent contractor / vendor
  o University setting
  o Online (e.g., Hadley)
  o CVRT
  o Peer training / support
  o OJT

Unit 2 Content: Part 2
Electronic Magnification
  o Standard desktop CCTV
  o Portable devices
  o Collapsible CCTV
  o Camera only CCTV
o CCTV + Computer
o CCTV + OCR

Week of April 3: Unit 3 Activities

• Online PowerPoint + lecture
• Listserv Discussion Question #3 posted April 3/ due April 9 by midnight
• See MyCourses for readings
• Quiz 3 April 9 by midnight

Unit 3 Content: Part 1
Resources
  o Tech Act centers
  o On-line organizations
  o University programs (DO IT, CSUN, University of Wisconsin - Stout)
  o Vendors
  o Consumer organizations

Unit 3 Content: Part 2
Apple Technology
  o Mac operating systems accessibility features
  o iOS accessibility features
  o Apps

Week of April 10: Unit 4 Activities

• Online PowerPoint + lecture
• Listserv Discussion Question #4 posted April 10/ due April 16 by midnight
• See MyCourses for readings
• Quiz 4 April 16 by midnight

Unit 4 Content: Part 1
Computer Access
  □ Operating systems

  o Input
    • Dictation software
    • LP keyboard
    • Adapted Keyboards
    • Touch screen
    • Refreshable Braille Display
    • Scanners

  o Processing
Output
- Large monitor
- Screen magnification software
- Text to speech
- Braille displays
- Braille translation software
- OCR software

Unit 4 Content: Part 2
Stand Alone devices
- Daisy readers
- Braille Notetakers
- OCR “reading machines”

Accessories
- Mounting tech
  - iPad Stands
- XY tables
- Light Sources
- Filters
- Connectivity (access to internet, networks)

Week of April 17: Unit 5 Activities

- Online PowerPoint + lecture
- Listserv Discussion Question #5 posted April 17 due April 21 by midnight
- See MyCourses for readings
- Quiz 4 April 21 by midnight

Unit 5 Content: Part 1
Special Populations
- Dual Sensory Loss
- Mobility / neuropathy
- TBI / Stroke / Memory issues
- Seniors

Unit 5 Content: Part 2
Case Studies
- Brandi
- Heidi
**On Campus Intensive**

**PART 2: Welcome to Bulldog Country!!**  
*Starts April 24, 2017 in the Holiday Inn Express conference room.*

<table>
<thead>
<tr>
<th>Date / Time</th>
<th>Class</th>
<th>Presentor</th>
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<tbody>
<tr>
<td><strong>Monday</strong></td>
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<tr>
<td>April 24</td>
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<tr>
<td>2:00 - 4:30</td>
<td>• Welcome</td>
<td>Cheryl Saucier</td>
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<tr>
<td>Evening Study Group</td>
<td>• Overview of week</td>
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<tr>
<td>7:30 - 9:30</td>
<td>• Brief essay presentation</td>
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<td></td>
<td>• Assign group resource project</td>
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<td>• Assign group project</td>
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<td>• Assign groups</td>
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<td></td>
<td>• First group project meeting</td>
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<tr>
<td><strong>Tuesday</strong></td>
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<td>April 25</td>
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<tr>
<td>8:30 - 4:30</td>
<td>• Job Analysis</td>
<td>Cheryl Saucier</td>
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<tr>
<td>Evening Study Group</td>
<td>• Assessment</td>
<td>Mike Self, Freedom Scientific</td>
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<tr>
<td>7:30 - 9:30</td>
<td>• Training</td>
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<td>• Group project case study review</td>
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<td></td>
<td>• Group project meeting</td>
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<td></td>
<td>• PM Lab</td>
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<tr>
<td><strong>Wednesday</strong></td>
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<tr>
<td>April 26</td>
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<tr>
<td>8:30 - 4:30</td>
<td>• Resources - extensive tour of online resources</td>
<td>Cheryl Saucier</td>
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<tr>
<td>Evening Study Group</td>
<td>• Work on resource assignment</td>
<td>Elizabeth Murrell, Indigo Logix (HumanWare)</td>
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<td>7:30 - 9:30</td>
<td>• PM Lab</td>
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<tr>
<td><strong>Thursday</strong></td>
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<td>April 27</td>
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<tr>
<td>8:30 - 4:30</td>
<td>• Special populations</td>
<td>Cheryl Saucier</td>
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<tr>
<td>Evening Study Group</td>
<td>• Emerging technologies</td>
<td>Paul Day, Tennessee Low Vision, LLC (Enhanced Vision)</td>
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<tr>
<td>7:30 - 9:30</td>
<td>• Group Project time</td>
<td>John Panarese, Mac for the Blind</td>
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<td>• PM Lab</td>
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</tbody>
</table>
| Friday  
| April 28  
| 8:30 - 4:30  
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| • Mac computer access  
| • Android accessibility  
| • iOS in depth  
| • Apps  
| • Exam  
|  
| Cheryl Saucier  
| Erin Lewis, Addie McBryde  
| Rehabilitation Center  
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