

COURSE SYLLABUS

REHB 576 CLINICAL OBSERVATIONS IN ASSISTIVE TECHNOLOGY

**Southern University and A&M College
Baton Rouge, Louisiana 70813**

I. Descriptive Information

A. Course Number: REHB 576

B. Course Title: Clinical Observations in Assistive Technology (AT)

C. Catalog Description:

This Internet-supported course reviews the clinical evaluation of AT as applied to the needs of persons with disabilities. The course covers various assessments for AT including: computer access, augmentative communication, electronic devices for activities of daily living, home and jobsite modifications, wheelchairs and seating, and vehicle modifications.

D. Instructor's Statement of Course Description:

The field of vocational rehabilitation has been significantly altered by the 1998 Amendments to the Rehabilitation Act. These alterations include an expanded emphasis on the role of AT throughout the rehabilitation process. This course will provide an opportunity for students to explore more fully the clinical aspects of conducting evaluations for AT and its application to the needs of persons with disabilities.

E. Credit Hours: 3.0

F. Prerequisites:

Coursework or experience in the following: Assistive technology, Foundations of Vocational Rehabilitation Practice and Medical Aspects of Disabilities.

G. Intended Audience:

Students pursuing an M.S. in Rehabilitation Counseling with a specialization in assistive technology

H. Instructors: Dr. Frank D. Puckett, Associate Professor

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II. Specification of Course Goals and Objectives

A. Statement of General Goals:

This course is designed to provide the rehabilitation counseling students with a unique opportunity to observe AT assessments and participate in clinical discussions with AT Specialists. The student's experience and knowledge will increase with respect to the vital role AT can play in helping clients reach their vocational rehabilitation outcomes. It is important for rehabilitation counselors to recognize their role as "consumers" of AT services and as such understand what occurs when their clients are evaluated for AT devices. The goal of the course is to improve services for persons with disabilities, by increasing the knowledge of counselors regarding appropriate strategies for conducting AT evaluations.

B. Student Learning Outcomes:

Upon completing this course, students will:

1. Identify and critique the steps in the clinician assessment of AT for individuals with disabilities by preparing a summary of the posted Internet Video class sessions which demonstrate how a clinician evaluates a person with a disability for a specific type of AT.
2. Identify the factors which influence the selection of appropriate assistive technology by preparing a two page report which synthesizes the Internet Video demonstration sessions and other information taken from the course textbook and Web resources.
3. Discuss the complexity of the assessment for assistive technology by participating in the question and answer sessions conducted by live, Internet Video conferencing with clinicians who are trained in the assessment in the various fields of assistive technology.
4. Identify and critique Web resources for information on assistive technology by submitting an abstract on an online resource for each of the assigned clinical areas covered in the course: job site modification, home modification, computer access, augmentative communication, adaptive driving and mobility and wheelchair seating systems.

C. Statement of Course Content:

Students will have access to a variety of informational resources, including a textbook which provides a clinical perspective on AT. Other resources will include online journal and web resources. Online discussion boards will provide opportunities for students to share the information they have gained from viewing the AT assessments and an opportunity to discuss AT issues with experts in the field. Throughout the course the

students will maintain a client-centered focus on the benefits of AT for enhancing function and independence for people with disabilities.

III. Readings

Textbook:

Olson, D., & DeRuyter, F. (2002). Clinician's Guide to Assistive Technology. St. Louis, MO: Mosby.

Webliography:

Links are posted to the course web pages (Webliography) to assist students in find resource information on AT. These links are reviewed, edited and/or replaced each time the course is offered. Some examples are the following:

1. Accommodation Ideas by Disability: <http://www.jan.wvu.edu/media/ideas.html>

This web site by the Job Accommodation Network presents job accommodation strategies by disability. Recommendations typically cite specific examples of assistive technology.

2. National Web Resource for Home Modifications (<http://homemods.org>) This site provides multiple links to national resource for modification of one's home to accommodate physical or sensory disabilities.

2. Computer Access: <http://trace.wisc.edu/computer>

This site provides an overview of adaptations to computer technology to accommodate physical or sensory impairments.

4. Digital Divide for all Persons: http://www.icdri.org/CynthiaW/the_digital_divide.htm

This web article discusses the digital divide for access and use of computers by people with disabilities.

5. Wheelchair University () This comprehensive website: http://www.wheelchairnet.org/wcn_wcu/wcu.html contains multiple resources lists and tutorial information on proper evaluation for and use of wheelchairs by individuals with disabilities.

Bibliography:

Galvin, J., & Scherer, M. (Eds.) (1996). *Evaluating, selecting, and using appropriate assistive technology*. Gaithersburg, MD: Aspen Pub.

Scherer, M. J. (2000). *Living in the state of stuck: How assistive technology impacts the lives of people with disabilities* (3rd ed.). Cambridge, MA: Brookline Books.

Flippo, K. J., Inge, K. J. & Barcus, J. M. (Eds.). (1995). *Assistive technology: A resource for school, work and community*. Baltimore: P. H. Brooks Pub. Co.

Riemer-Reiss, M. L., & Wacker, R. (2000). Factors associated with assistive technology discontinuance among individuals with disabilities. *Journal of Rehabilitation*, 66(3), p. 44, 7p.

Driscoll, M., Rodger, S., & De Jong, D. (2001). Factors that prevent or assist the integration of assistive technology into the workplace for people with disabilities with spinal cord injuries: Perspectives of the users and their employers and co-workers. *Journal of Vocational Rehabilitation*, 16(1), 53-66.

Gelderblom, G., de Witte, L. Scherer, M., & Craddock, G. (2002). Matching person & technology (MPT) assessment process. *Technology & Disability*, 14(3), p. 125, 7p.

Schneider, M. (1999). Achieving greater independence through assistive technology, job accommodation and supported employment. *Journal of Vocational Rehabilitation*, 12(3), pp. 159-164.

IV. Instructional Procedures

REHB 576 is a 3-credit course and requires you to devote time and effort of at least 3-5 hours per week for the successful completion of the course. As it is an online class, it will be available to you on a 24-hour basis. To receive credit for 3-5 hours per week, you must logon/access the Internet to:

- View web videos materials
- Interact with Instructors, AT experts, AT Consumers and other students
- Complete assignments
- Take quizzes and exams
- Participate in week-long Discussion Board sessions

As an online course, the following “Best Practices” for effective and online teaching will be followed.

(<http://www.fctel.uncc.edu/pedagogy/basicscoursedevelop/BestPractices.html>)

Readings require written responses.

Thoughtful Questions are posted for interactive online class discussions.

Individual Tasks with Reviews include written reports on each AT assessment area.

Case Studies will be discussed online in collaboration with AT Clinicians.

Visual Studies and Visual Aids will include 30 minute video sessions on each AT assessment area.

Weekly Online Group Discussions using the Blackboard DB will integrate learning activities for each week.

Live, Interactive Communication will be established with AT clinical experts for each AT assessment area. Sessions will be archived for review and access by students who missed the class session.

V. Evaluation of Students

Unit Quizzes = 20 Points, (4 quizzes)

Class Participation = 35 Points

Student reports on the clinical demonstration videos = 30 Points (6 reports)

Report on each AT assessment area describing web resources = 60 Points (6 reports)

Sectional examinations on readings assignments = 30 Points (two exams)

Term Paper on AT = 25 Points. Students will prepare and submit a report on an interview with a disabled consumer, AT clinician or AT/DME Vendor.

Note: The Course Website has not been constructed. Items to be completed with the development of the course website include preparation of a grading policy for student assignments and class participation. Due dates for all assignments will be posted to the Blackboard Course Calendar. Instructions for negotiating the course website will be developed and posted for student access.

VI. Grading

The grading scale is: 180 - 200 points = A

160 - 179 points = B

140 - 159 points = C

120 - 139 points = D

Below 119 = F

VII. Course Requirements

A. Academic Requirement

To complete this course successfully, you must:

- Use a computer with broadband access to the Internet (56 Kb/sec or higher) with the following software installed: Quicktime Player, Real Player, Windows Media, Adobe Acrobat, Wimba Chat Software, Internet Explorer and Netscape Browsers and other Microsoft Office Products (to include MS Word and Powerpoint). All software required for this course is free and downloadable except the MS Office products.
- Access and view web-videos prepared by AT clinicians at the T.K. Martin Center on Technology at Mississippi State University so that you will gain an understanding of the process by which clinicians conduct assessments for AT.
- Participate in one-hour synchronous (real-time) online class sessions, using Wimba or live Internet conferencing, with the AT clinical staff at the T.K. Martin Center to discuss the AT video sessions posted for the week and discuss topics specific to that area of AT assessment.
- Participate in asynchronous (on-demand) week-long class discussions using the Blackboard Discussion Board (DB) to focus on more global issues related to AT, to include AT consumer perspectives.
- Complete all learning tasks listed in the course schedule.

This online course must be completed within the time frame of one semester. The students must abide by regular on-campus grading policies and calendar.

B. Administrative Requirements

To the extent possible, this course will implement universal design principles in conducting this course. This will include the development of materials to accommodate individuals with sensory (hearing or vision) or physical impairments. This will require that all text elements are available in digital format, all graphical or video material include a text description and all audio material is provided with captions.

Disability Statement:

If you have a disability and require special materials or accommodations, please discuss this with the instructor during or following the first week of class (preferably after the first class period). Only persons with a verifiable disability will be permitted to use appropriately modified academic accommodations to address course requirements. It is your responsibility to contact the Office of Disability Services and notify that office of your disability. Upon receipt of a letter from the Office of Disability Services, the instructor will make appropriate academic accommodations as recommended.

LiveText Subscription:

Southern University and A&M College-Baton Rouge has entered into partnership with LiveText, Inc. to provide online academic resources for student collaboration and learning outcomes assessment. Therefore, all students enrolled in this course are required to purchase a subscription from LiveText, Inc. through the Southern University Bookstore. LiveText, Inc. provides students with the electronic tools and services needed to serve them in their courses and in their career or academic pursuits beyond graduation.

LiveText is a dynamic tool that will enable you to:

- Create Electronic Portfolios for storing and displaying coursework for use anytime and anyplace;
- Share your résumés, professional portfolios and virtually any projects that can be photographed, video recorded, and uploaded to prospective employers and others who need or want to know about your accomplishments;
- Engage in discussion boards with other students, exchange feedback, and create study groups and other types of social networks.
- Complete assignments in key/required courses where LiveText has been embedded (without LiveText, you will not be able to complete these assignments).
- Create a complete record of your academic career that is malleable and easily accessible.
- Engage in developing a results driven culture of assessment at Southern University.
- Participate in a process that will allow for data-driven curricular improvements that foster improved student learning and performance.

VIII. Course Schedule:

Instructional Module 1: Overview of Clinical Practice in the Assessment and Delivery of Assistive Technology (AT) Services.

Timeframe: Weeks 1, 2 and 3.

Weekly Topics:

- Week 1 - Introduction to the role of clinicians in the assessment and deliver of Assistive Technology (AT) services;
- Week 2 - Current clinical practice for AT specialists in the United States and other countries, including a discussion of Best Practices concepts. Strategies used by clinicians to assessment the AT needs of persons with disabilities.
- Week 3 - Measuring rehabilitation outcomes from AT services and devices. Addressing the issue of assistive technology device abandonment.

Learning Outcomes (aligned with Course Learning Outcomes 1, 2, 3 and 4).

Upon successful completion of this module, you will be able to:

- Describe the process of matching consumers with appropriate assistive technology by responding to Instructor's questions in the online Wimba chat sessions.
- Discuss the contexts and application of AT in settings such at the home, school, work and in the community by participation in the week-long Blackboard DB sessions and posting comments and web links on AT use in these settings.
- List the human factors which are considered in AT assessment and other issued related to environmental access by responding to Instructor's questions in the online Wimba chat sessions.
- Describe outcomes and performance monitor of AT use by responding to Instructor's questions in the online Wimba chat sessions.

Learning Activities:

- Read Chapters 1 – 6 in the course textbook.
- Complete Quiz 1 (5 grade points) administered via Blackboard, timed and unproctored. Due date: Friday of Week 3.
- Participate in the weekly Wimba online chat sessions. Sessions will be archived for later review and access for students who were not able to participate in the live Internet session.

Instructional Module 2: Job and Worksite Modifications.

Timeframe: Weeks 4 and 5.

Weekly Topics:

- Week 4 - Jobsite modifications for individuals with disabilities (applied ergonomics). Review of basic ergonomics as applied to work settings. Review of the *Americans with Disabilities Act Accessibility Guidelines* and application to worksite modifications.
- Week 5 - Web resources for job accommodations. Case studies on job accommodations presented by the T.K. Martin Internet Video.

Learning Outcomes (aligned with Course Learning Outcomes 1, 2, 3 and 4).

Upon successful completion of this module, you will be able to:

- Describe the process of determining appropriate assistive technology for work settings by preparing a summary report of the T.K. Martin video segment on Job and Worksite Modifications.
- Describe other factors which are considered in AT assessment in work settings by participating in a question and answer session in Wimba with the Instructor and the T.K. Martin AT staff.
- Locate and report on additional information on this topic by preparing and posting an abstract on Blackboard of web resources on worksite modifications.

Learning Activities:

- Read Chapter 23 in the course textbook. Review the ADA Accessibility Guidelines: <http://www.access-board.gov/adaag/html/adaag.htm>
- Access and view the T.K. Martin Video segment on job and worksite modifications.
- Participate in the weekly Wimba online chat sessions with T.K. Martin staff. Sessions will be archived for later review and access for students who were not able to participate in the live Internet session

Instructional Module 3: Activities of Daily Living and Home Modifications.

Timeframe: Weeks 6 and 7.

Weekly Topics:

- Weeks 6 – Activities of Daily Living (ADL) and Home modifications (including the application of electronic devices for environmental control).
- Week 7 - National resources for accessible living environments. Case studies of home modifications presented by the T.K. Martin Internet Video.

Learning Outcomes (aligned with Course Learning Outcomes 1, 2, 3 and 4).

Upon successful completion of this module, you will be able to:

- Describe the process of determining appropriate assistive technology for ADL and home modifications by preparing a summary report of the T.K. Martin video segment on ADL and Home Modifications.
- Describe other factors which are considered in AT assessment in work settings by participating in a question and answer session in Wimba with the Instructor and the T.K. Martin AT staff.
- Locate and report on additional information on this topic by preparing and posting an abstract on Blackboard of web resources on ADL and home modifications.

Learning Activities:

- Read Chapter 24 in the course textbook.
- Complete Quiz 2 (5 grade points) administered via Blackboard, timed and unproctored. Due date: Friday of Week 7.
- Access and view the T.K. Martin Video segment on ADL and home modifications.
- Participate in the weekly Wimba online chat sessions with T.K. Martin staff. Sessions will be archived for later review and access for students who were not able to participate in the live Internet session

Instructional Module 4: Computer Access.

Timeframe: Weeks 8 and 9.

Weekly Topics:

- Weeks 8 - Computer access (adaptive computer systems for persons with disabilities, including individuals with learning disabilities). Review of basic computer systems and terminology.
- Week 9 - Identification of special interface controls and displays to accommodate disabilities. Case studies presented on the T.K. Martin Internet Video.

Learning Outcomes (aligned with Course Learning Outcomes 1, 2, 3 and 4.)

Upon successful completion of this module, you will be able to:

- Describe the process of determining appropriate assistive technology for access to and use of computers by preparing a summary report of the T.K. Martin video segment on Computer Access.
- Describe other factors which are considered in AT assessment in work settings by participating in a question and answer session in Wimba with the Instructor and the T.K. Martin AT staff.
- Locate and report on additional information on this topic by preparing and posting an abstract on Blackboard of web resources on Computer Access.

Learning Activities:

- Read Chapter 7 and 8 in the course textbook.
- Complete Sectional Exam 1 (15 grade points) administered via Blackboard, timed and unproctored. Due date: Friday of Week 9.
- Access and view the T.K. Martin Video segment on Computer Access.
- Participate in the weekly Wimba online chat sessions with T.K. Martin staff. Sessions will be archived for later review and access for students who were not able to participate in the live Internet session

Instructional Module 4: Augmentative and Alternative Communication Devices (AAC).

Timeframe: Weeks 10 and 11.

Weekly Topics:

- Weeks 10 - Augmentative/Alternative Communication. Importance of functional communication to appropriate rehabilitation outcomes and personal independence and autonomy.
- Week 11 - Exploration of web resources for information on communication devices. Case studies presented on the T.K. Martin Internet Video.

Learning Outcomes (aligned with Course Learning Outcomes 1, 2, 3 and 4).

Upon successful completion of this module, you will be able to:

- Describe the process of determining appropriate assistive technology for access to and use of computers by preparing a summary report of the T.K. Martin video segment on AAC.
- Describe other factors which are considered in AT assessment in work settings by participating in a question and answer session in Wimba with the Instructor and the T.K. Martin AT staff.
- Locate and report on additional information on this topic by preparing and posting an abstract on Blackboard of web resources on AAC.

Learning Activities:

- Read Chapter 9 and 10 in the course textbook.
- Access and view the T.K. Martin Video segment on AAC.
- Participate in the weekly Wimba online chat sessions with T.K. Martin staff. Sessions will be archived for later review and access for students who were not able to participate in the live Internet session.

Instructional Module 5: Driver Rehabilitation and Vehicle Modifications.

Timeframe: Week 12.

Weekly Topics:

- Weeks 12 - Driver rehabilitation (evaluation, prescription and training on adaptive driving systems). Traffic safety principles as applied to adaptive driving systems. Clinical approach to assessment for adaptive driving systems. Review of the state-of-the-art in adaptive driving systems and vehicle modifications. Licensure for Driver Rehabilitation Specialists.

Learning Outcomes (aligned with Course Learning Outcomes 1, 2, 3 and 4).

Upon successful completion of this module, you will be able to:

- Describe the process of determining appropriate assistive technology for access to and use of vehicle modifications and driver training by preparing a summary report of the T.K. Martin video segment on vehicle modifications.
- Describe other factors which are considered in AT assessment in work settings by participating in a question and answer session in Wimba with the Instructor and the T.K. Martin AT staff.
- Locate and report on additional information on this topic by preparing and posting an abstract on Blackboard of web resources on vehicle modifications and driver training.

Learning Activities:

- Read Chapter 21 in the course textbook.
- Complete Quiz 3 (5 grade points) administered via Blackboard, timed and unproctored. Due date: Friday of Week 12.
- Access and view the T.K. Martin Video segment on Vehicle Modifications and Driver Rehabilitation.
- Participate in the weekly Wimba online chat sessions with T.K. Martin staff. Sessions will be archived for later review and access for students who were not able to participate in the live Internet session

Instructional Module 6: Wheelchairs, Mobility and Seating Systems (WAS).

Timeframe: Weeks 13 and 14.

Weekly Topics:

- Weeks 13 - Wheelchairs and seating systems. Review of terminology for wheelchair and seating systems. Recognition of consumer issues for wheelchair/seating systems.

- Week 14 - Web resources for information on wheelchairs and seating systems. Case studies presented on the T.K. Martin Internet Video.

Learning Outcomes (aligned with Course Learning Outcomes 1, 2, 3 and 4).

Upon successful completion of this module, you will be able to:

- Describe the process of determining appropriate assistive technology for mobility, wheelchairs and seating systems by preparing a summary report of the T.K. Martin video segment on WAS.
- Describe other factors which are considered in AT assessment for wheelchairs and mobility by participating in a question and answer session in Wimba with the Instructor and the T.K. Martin AT staff.
- Locate and report on additional information on this topic by preparing and posting an abstract on Blackboard of web resources on WAS.

Learning Activities:

- Read Chapter 13 and 19 in the course textbook.
- Complete Quiz 4 (5 grade points) administered via Blackboard, timed and unproctored. Due date: Friday of Week 14.
- Access and view the T.K. Martin Video segment on WAS.
- Participate in the weekly Wimba online chat sessions with T.K. Martin staff. Sessions will be archived for later review and access for students who were not able to participate in the live Internet session.
- Submit term paper reporting an interview with an AT consumer, AT clinician or AT/DME Vendor (25 grade points).

Week 15

- Complete Sectional Exam 2 (15 grade points) administered via Blackboard, timed and unproctored. Due date: Last Class Period.