EDS 333
MEDICAL ISSUES & ASSISTIVE TECHNOLOGY FOR INDIVIDUALS WITH EXCEPTIONAL LEARNING NEEDS

Eastern Mennonite University
Spring 2013

INSTRUCTOR:

Instructor: Dianne Koontz Lowman **Class Time: Monday, 8:00-11:00 am**
Office: CC 202A **Location:** CC 201
Phone Contact: 540-298-8280 (home) **Semesters Hours:** 1
Email Contact: dklowman@earthlink.net (this come directly to my cell phone)

Course web site: EMU'S Moodle (Please be sure to check your EMU e-mail regularly)

MEETING TIMES AND LOCATION:

The class will meet for six different sessions. Please refer to tentative schedule or block calendar for times and dates.

DESCRIPTION:

This course will provide knowledge of current issues in the provision of education to students with complex health care needs, including, planning, preparation of environment, student, and other students, training, and documentation. The role of school personnel and the use of universal precautions for safe environments will be highlighted.

This course is designed to provide information related to assistive technology for students with disabilities. Topics covered will include legislative policies regarding assistive technology, information about levels of assistive technology from low to high technology, evaluation of assistive technology needs, considerations and provisions of assistive technology, curriculum integration strategies, IEP considerations, funding sources, and practical applications in the educational setting using a variety of assistive technology services and devices. Participants will demonstrate knowledge and competencies of assistive technology applications through discussions, assignments, case study development, presentations, and demonstrations.

LEARNING OUTCOMES:

- Students will identify the various medical aspects of students with various disabilities and the subsequent need for medications and the use of universal precautions.
- Students will list the steps in the planning process for preparing for the inclusion of students with complex health care needs in educational settings, focusing on training and documentation.
- Students will discuss the roles of specific personnel in the provision of health related procedures in the classroom setting.
- Students will describe the history of assistive technology (AT), legislative policies regarding AT, funding sources for AT, components of AT, and the primary users of assistive technology.
- Students will describe the understanding of the essential human factors for students with special needs within the classroom settings.

- Students will describe the levels of assistive technology including no-technology, low-technology, and high-technology devices and services.
- Use assistive and instructional technology in order to access the general education curriculum to promote student learning.
- Students will identify various software applications to instruct students with special needs.
- Students will be identify and incorporate a systematic assessment process to evaluate and document student progress through data collection.
- Students will be use appropriate AT to assist student in making progress within the general education curriculum (i.e., Virginia's Standards of Learning SOL) and to meet IEP goals.
- Students will use an acceptable writing process to incorporate and "consider" assistive technology devices and/or services in the IEP.
- Students will identify assistive technology issues across the ages from early childhood to high school.
- Students will identify a variety of factors related assistive technology failure.

CEC KNOWLEDGE AND SKILLS:

CC2K7 Effects of various medications on individuals with exceptional learning needs
GC2K3 Etiologies and medical aspects of conditions affecting individuals with disabilities
GC2K6 Types and transmission routes of infectious disease
CC5A15 Structure, direct, and support the activities of paraeducators, volunteers, and tutors
CC5S16 Use universal precautions
Gc7S7 Design and implement curriculum and instructional strategies for medical self-management procedures.
CC8S10 Create and maintain records
CC9S7 Practice within one's skill limit and obtain assistance as needed.
CC10S1 Maintain confidential communication about individuals with exceptional learning needs
CC10S2 Collaborate with families and others in assessment of individuals with exceptional learning needs
CC6S1 Use strategies to support and enhance communication skills of individuals with exceptional learning needs.
CC6K4 Augmentative and assistive communication strategies.
CC7S9 Incorporate and implement instructional and assistive technology into the educational program.
MR6S1 Plan instruction on the use of alternative and augmentative communication systems

Academic Integrity Policy (AIP):

EMU faculty and staff care about the integrity of their own work and the work of their students. They create assignments that promote the interpretive thinking and work intentionally with students during the learning process. Honesty, trust, fairness, respect, and responsibility are characteristics of a community that is active in loving mercy, doing justice, and walking humbly before God. EMU defines plagiarism as occurring when a person presents as one's own someone else's language, ideas, or other original (not common-knowledge) material without

acknowledging its source (adapted from the Council of Writing Program Administrators). [Taken from *Academic Integrity*, 2012-2013 Undergraduate Catalog, http://www.emu.edu/catalog/.] This course will apply EMU's AIP (see catalog, pp. 16-19) to any events of academic dishonesty. Students will be asked to meet with the instructor (and other affected persons, where appropriate) to examine the effects of the dishonesty on others and to develop an accountability plan.

Academic Support Services:
EMU is committed to working out reasonable accommodations for students with documented disabilities to ensure equal access to the university and its related programs. The university complies with Section 504 of the Rehabilitation Act of 1973, the Civil Rights Restoration Act of 1988 and the American with Disabilities Act of 1990 (*EMU Undergraduate Catalog,* http://www.emu.edu/catalog/academicsupport.pdf*)*. Students requiring additional assistance should make their needs known to the professor of this course so that appropriate accommodations may be made.

Writing Tutors:
Please take advantage of the free individual tutoring from our writing tutors. Writing tutors are strong writers who hold scheduled one-on-one sessions with students and are an excellent resource for writers at any level or at any stage in the writing process. Please remember that writing tutors do not provide an editing or proofreading service. They will help you put what you learn into practice and will work with you to improve your own proofreading and editing skills. To make an appointment, please visit the Academic Support Center on the 3rd floor of the Sadie Hartzler Library (http://www.emu.edu/academic-support/)..

Writing Standards:
Students are expected to follow the EMU writing standards. This includes the use of the 6th edition of the American Psychological Association style of writing. An overview of the APA Manual can be viewed at http://owl.english.purdue.edu/owl/resource/560/01/.

REQUIRED TEXT/READINGS:

Johnston, L., Carpenter, L. B, & Beard, L. A. (2011). *Assistive technology: Access for all students* (2nd ed). NJ: Upper Saddle River.

The Family Center on Technology and Disability (2005). *Family information guide to assistive technology: Assistive technology works!* (This can be found on Moodle.)

OTHER REFERENCES REQUIRED (can be found on Moodle):

Lowman, D. K. (1998). Preschoolers with complex health care needs in centered-based settings. *Young Exceptional Children, 1*(4), 2-6.

Chantry, J., & Dunford, S. (2010). How do computer assistive technologies enhance participation in childhood occupations for children with multiple and complex disabilities: A review of the literature. *British Journal of Occupational Therapy, 73*(8), 351-365.

Gcaza, S., & Lorenzo, T. (2008). Discovering the barriers that stop children with disabilities from being children: The impact of lack of access to mobility devices-a human rights perspective. *South African Journal of Occupational Therapy, 38*(1).

Okolo, C. M. & Bouck, E. C. (2007). Research about assistive technology: 2000-2006. What have we learned? *Journal of Special Education Technology, 22*, 19-33.

Zabala, J. S. (2002). *A brief updated introduction to the SETT framework.* Retrieved from http://www2.edc.org/ncip/workshops/sett/SETT_Framework_article.html

RESOURCE TEXTS:

Alper, S., & Raharimirina, S. (2006). Assistive technology for individuals with disabilities: A review and synthesis of the literature. *Journal of Special Education Technology, 21*(2), 47-64.

Acrey, C., Johnstone, C., & Milligan, C. (2005). Using universal design to unlock the potential for academic achievement of at-risk learners. *Teaching Exceptional Children, 38*(2), 22-31.

Boon, R. T., Burke, M. D., Fore, C., III, & Spencer, V. G. (2006). The impact of cognitive organizers and technology-based practices on student success in secondary social studies classrooms. *Journal of Special Education Technology, 21(*1), 5-11.

Boone, R., & Higgins, K. (2007). The role of instructional design in assistive technology research and development. *New Directions in Research, 42*(1), 135-140.

Dell, A. G., Newton, D. A., & Petroff, J. G. (2008). *Assistive technology in the classroom: Enhancing the school experiences of students with disabilities.* NJ: Upper Saddle River

Elder-Hinshaw, R., Manset-Williamson, G., Nelson, J. M., & Dunn, M. W. (2006). Engaging older students with reading disabilities: Multimedia inquiry projects supported by reading assistive technology. *Teaching Exceptional Children, 39*(1), 6-11.

King, T. W. (1999). *Assistive technology: Essential human factors.* Needham Heights, MA: Allyn & Bacon.

Lacava, P. G., Golan, O., Baron-Cohen, S., & Myles, B. S. (2007). Using assistive technology to teach emotion recognition to students with Aspberger Syndrome. *Remedial and Special Education, 28*(3), 174-181.

Poel, E. W. (2007). Enhancing what students can do. *Educational Leadership, 64*(5), 64-66.

Watson, S., & Johnson, L. (2007). Assistive technology in the inclusive science classroom. *Science Teacher, 74*(3), 34-38.

Watts, E. H., O'Brian, M., & Wojcik, B. W. (2004). Four models of assistive technology consideration: How do they compare to recommended educational assessment practices? *Journal of Special Education Technology, 19*(1), 43-56.

COURSE REQUIREMENTS:

1. **Professionalism (5 points)**
   Students are expected to arrive 3 minutes prior to the start of class and to complete assignments according to the schedule in the syllabus. Please consider finding a partner to collect notes and handouts if you miss a class. This course is designed to create a highly collaborative and professional atmosphere. **Cell phones, blackberries, etc. are not to be used in class; please turn such devices off prior to class.** At the end of February, before you enter your practicum, please change your voice message on your phone so that the wording is simple, professional, and contains no music.

2. **Attendance, Class Participation, and Assigned Readings (10 points)**
   Students are expected to attend all classes except in cases of emergency or department-approved activities. Class attendance and participation constitute a portion of the final grade, and contribute to permission to participate in the field experience. Students should notify the instructor prior to an absence from class. Students are expected to complete all reading/writing assignments and demonstrate thoughtful reflection in written and oral work. All assignments are to by typed unless indicated otherwise, and should meet the EMU Writing Standards, following APA requirements; written assignments not following these guidelines for professionalism will be handed back to the student for revision. Students will be required to complete in-class assignments such as quizzes or "quick writes", lesson planning for content instruction, self-evaluations, task analysis, and other project/participation activities. Please note that ten percent will be deducted for every day that an assignment is late. Communication is a vital part of teaching and learning; students are expected to regularly check Moodle and their EMU email accounts throughout the course and the field experience. Completions of all reading assignments are expected in order to conduct successful class discussions. Active participation in class discussions and classroom activities are also expected.

3. **Web Search Critique (15 points)**
   Using a Web search engine, locate sites that pertain to assistive technology employed in special education or rehabilitation. Be sure to record the URL's for the sites. Of the sites you find, select the top 10 that seem to provide the most useful information for teachers. For your **top** choice, write a critique (one page) that reflects the reasons why the site is better than the other sites you found. Be sure to relate your critique back to things covered in class and your assigned readings. What made the site better? What are the benefit of the site in comparison to the others you viewed? More specific guidelines/rubrics will follow. This assignment is due in class on January 28, 2013.

4. **AT Checklist and Reflection (15 points)**
   Students will be given a checklist in class of common assistive technology devices. Students will take this form with them to their placement classroom and complete the form. Using the information from the form the student will write a 1-2 page reflection regarding what they observed in the classroom, what devices were being used, and what essential devices were

missing, but may benefit specific students. The checklist, student notes, and the reflection paper are due April 2, 2013. More specific guidelines/rubrics will follow.

5. Assistive Technology Communication Assessment Project (35 points)

Using the SETT framework, the student will conduct an informal assessment of a particular student's needs in the area of communication (choose a student from your field placement classroom). Students will assess and determine what devices are necessary to enhance the student's communication skills. The student will consider the following questions when conducting the assessment and determining appropriate devices: (1) What are the areas of need pertaining to communication for the chosen student?; (2) What strategies/devices are currently being used?; (3) What activities take place during the time the student is attempting to communicate?; (4) What specific strategies/devices are needed to enhance language development and teach communication skills to individual ELN students? (5) What augmentative, alternative, and assistive technologies are needed to support and enhance communication? The student will write a 4-5 page paper (APA style) discussing the answers to the previous questions, along with recommendations based on the AT assessment. More specific guidelines/rubric will be distributed in class. Students have till April 19th to complete assessment data. The student will turn in all assessment data (notes) and paper on April 23rd at 1:30.

6. Final Examination Presentation: Assistive Technology Communication Assessment Project (20 points)

Students will present their AT Communication Assessment Project to the class on the April 23, 2013 from 1:30- 2:30 (in lieu of a final exam).

ASSIGNMENTS AT A GLANCE:

Assignment	Points	Due Date
Professionalism, Attendance, Participation, & Assigned Readings	15	Each class
Web Search Critique	15	Jan. 28
AT Checklist & Reflection	15	April 2
AT Communication Project Write-up	35	April 23
AT Communication Project Presentation (Final Exam)	20	April 23 (1:30-3:30)
Total	100	

GRADING SCALE:

A	96 -100	**C+**	82 - 84
A-	94 - 95	**C**	77 - 81
B+	91 - 93	**C-**	74 - 76
B	87 - 90	**D**	67 - 73
B-	85 - 86	F	0 – 66

TENTATIVE COURSE SCHEDULE:

All reading assignments are to be read **prior to class** in order for meaningful dialogue to take place. Required textbook readings are listed in plain manuscript. Additional assigned readings will be in italics and can be found either on Moodle or will be handed out in class. Project assignments are in bold.

Date	Topic	Readings & Assignments
Monday Jan. 7	• Introduction to Assistive Technology (AT)-An Overview • *Including Samuel* video	
Monday Jan. 14	• Legal Requirements of AT • AT Continuum	AT (Access) Chapter 1 & 2 *Family Guide Section 1 & 2* *Okolo & Bouck (2007)*
Monday Jan 28	• Assessing Student's AT Needs • Introduction to the SETT Framework	AT (Access) Chapter 3 *The SETT Framework* *Family Guide Section 3 & 4* **Web Search Critique Due**
Monday Feb 11	• AT for Young Children • AT for Positioning and Mobility • AT for Communication • AT for Sensory Impairments • AT for High Incidence Disabilities	AT (Access) Chapters 4-8 *Gcaza & Lorenzo (2008)* *Chantry & Dunford (2010)*
Tuesday April 2	• Introduction to Medical Issues in the Classroom	*Lowman (1998)* **Assistive Technology Checklist and Reflection Paper Due**
Tuesday April 23 1:30-2:30	• Final Exam/Presentations	**Assistive Technology Communication Assessment Presentation and Write-Up Due**