GEORGE MASON UNIVERSITY
COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT
SPECIAL EDUCATION PROGRAM

EDSE 517: Computer Applications for Special Populations
Course Syllabus – Spring 2005

Instructor: Peg Siegenthaler
Section # 607: 4:30 to 8:30 Tuesday
Location: Prince William Campus of George Mason University, Bull Run Hall, Room 252 (Computer Lab)
Phone: 703-791-7292
Email: siegenp@pwcs.edu
Office Hours: By appointment, Independent Hill Complex, Building 100, Room 13

Most course information, lectures, and readings will be posted on Blackboard at http://blackboard.gmu.edu. Additional readings will be handed out in class. There is no required textbook.

COURSE DESCRIPTION

This course is a lecture/laboratory course providing understanding of computer technology and its implications for instructional programs and career skills for students with disabilities. Laboratory and demonstration experiences will enable students to better utilize devices and software in special education settings.

OBJECTIVES/COMPETENCIES

Students will be able to:
Demonstrate an understanding of the history of assistive technology
Describe and implement a comprehensive set of procedures for software review and evaluation for specific populations
Describe and utilize key software for specific populations
Demonstrate proficiency in a variety of technologies utilized to enhance written and/or spoken communication
Demonstrate the use of technologies designed to aide in literacy activities
Demonstrate the use of different classroom management tools and discuss their applicability in different settings
Describe and utilize key devices and software tools designed to help individuals with sensory impairments
Describe and utilize key devices and software tools designed to help individuals with physical impairments
Describe and implement accessibility considerations for Internet design on own web page
Design an appropriate technology integrated lesson plan for a specific special education population

NATURE OF COURSE DELIVERY

Learning activities in this class will include the following:
Class lecture, discussion, and participation
Software and hardware presentations
Group and independent laboratory activities
Class presentations
Written papers using the American Psychological Association format (5th edition)

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT STATEMENT OF EXPECTATIONS:

The Graduate School of Education (GSE) expects that all students abide by the following:

Students are expected to exhibit professional behavior and dispositions. See gse.gmu.edu for a listing of these dispositions.

Students must follow the guidelines of the University Honor Code. See http://www.gmu.edu/catalog/apolicies/#TOC H12 for the full honor code.

Students must agree to abide by the university policy for Responsible Use of Computing. See http://mail.gmu.edu and click on Responsible Use of Computing at the bottom of the screen.

Students with disabilities who seek accommodations in a course must be registered with the GMU Disability Resource Center (DRC) and inform the instructor, in writing, at the beginning of the semester. See www.gmu.edu/student/drc or call 703-993-2474 to access the DRC.

GRADING CRITERIA

A = 90-100%
B = 80-89 %
C = 70-79%
D = 60-69%
F = <60%

ASSIGNMENTS AND EVALUATIONS

Students will be evaluated on the following:

1. **Class and Lab Participation** as demonstrated by participation and utilization of lab time in an effective and efficient manner **(15 points)**
2. **Software Review (Due 4/12):** Students will choose a piece of instructional software to review. A brief description of the software should precede a thorough review of the software and its possible application within a chosen environment. Late projects will be penalized. Please refer to the scoring rubric for additional information on this assignment. **(15 points)**
3. **Tutorial (Due 4/26):** Students will create a step-by-step tutorial intended for guiding a new user with software or hardware selected for this assignment or activity. The tutorials will be presented in class. Late projects will be penalized. Please refer to the scoring rubric for additional information on this assignment. **(20 points)**
4. **Web Page Design (Due 5/17):** Students will be responsible for designing their own accessible web page using *Lectora*. The web pages will be presented in class. Late projects will be penalized. Please refer to the scoring rubric for additional information on this assignment. **(25 points)**
5. **Assistive/Instructional Technology Lesson (Due 5/31):** Students will design a lesson using an instructional or assistive technology of their choice. The lessons will be presented in class. Late projects will be penalized. Please refer to the scoring rubric for additional information on this assignment. **(25 points)**

In addition to providing a hard copy of the assignments, all assignments must be emailed to the instructor or submitted to the Blackboard Drop Box by the start of class on the due date.

Students are expected to attend class sessions on time and actively participate in group discussions and activities. Excessive absences will result in missed lab assignments and decreased class participation points.

All out-of-class assignments are to be completed *prior* to the beginning of class on the date that they are due. If you are absent, the due date does not change, and students are responsible to make sure that all assignments are handed in on time. Late assignments will result in a reduction in points.

TENTATIVE CLASS SCHEDULE AND ASSIGNMENT DUE DATES

Session Number	Date	Class Activities	Assignments and Due Dates
1	3/29	Lecture and Lab: Introduction to AT; Software features and evaluation	
2	4/5	Lecture and Lab: Microsoft Accessibility; Technology tools for teachers	
3	4/12	Lecture and Lab: AT for students with learning disabilities – Reading and Writing tools	Software Review due
4	4/19	Lecture and Lab: AT for students with physical impairments or sensory impairments	
5	4/26	Lecture and Lab: Using the Internet for instruction	Tutorial due; Student presentations
6	5/3	Lecture and Lab: Designing web pages for content and accessibility; Software to create and post web pages; *Lectora* tutorial **Class will be at Hyton High IT lab, bring CD**	
7	5/10	Lecture and Lab: Work on web pages; **Class will be at Hylton High IT lab, bring CD**	
8	5/17	Lecture and Lab: Intellitools; Augmentative and alternative communication	Instructional web pages due; student presentations
9	5/24	Lab: Finish work; student presentations/ AT and the IEP	
10	5/31	Student Presentations	Assistive/ Instructional Technology Lesson Plan due; Student presentations

Assignments
EDSE 517: Computer Applications for Special Populations
Scoring Rubric for Software Review

Software Review Paper (15 points): Due on 4/12

Choose a piece of software that would be appropriate to use in your classroom to review; it should be a fairly recent version. Address the primary features of the software including accessibility and other topics addressed in class (content, user friendliness, adult management features, support materials, and value). The actual software review should be 1-2 pages that can be used as a reference for a potential software user. You may use any of the software review formats introduced in class, or you may feel free to use your own evaluation format. ***Following the review should be a one-page reflection of your thoughts about the software, including pros and cons, from your perspective***. Late projects will be penalized.

Exemplary paper (13-15 points): ***Appropriate software chosen, thorough and thoughtful review of software, including clear description of primary features (content, user friendliness, adult management features, support materials, value) and overall accessibility. Graphic representing software included. Solid explanation of student's opinions of software, good writing style, free of mechanical or stylistic errors. Detailed, yet concise reflection indicating your thoughts about the software.***

Adequate paper (10-12 points): ***Good overall paper, lacking in one or two of the criteria for an exemplary paper. Not entirely reflective or thoughtful, or minor writing style errors may be present.***

Marginal paper (7-9 points): ***Overall acceptable paper, but with one or more significant problems. Contains some useful information, but may have substantial problems with evaluation, writing style, or design.***

Inadequate paper (1-8 points): ***Paper with substantial problems in important areas such as writing, description of software, evaluation of software, overall thoughtfulness. Contains little or no information of value to special education practice.***

Unacceptable/No paper (0 points): ***Paper with no value whatsoever relative to the assignment, or no paper turned in at all. May describe software of no value that was not approved for this assignment.***

Exemplary paper	Adequate paper	Marginal paper	Inadequate paper	Unacceptable/ No paper
13-15	10-12	7-9	1-8	0

SOFTWARE REVIEW

NAME:_____

	Points	**Comments**
Accessibility (1 pt)		
Description of primary Features:		
1. Content (2 pts)		
2. User friendliness (2 pts)		
3. Adult management features (2 pts)		
4. Support materials (2 pts)		
5. Value (2 pts)		
Graphic representing software (1 pt)		
Author's opinion of software clearly stated (3 pts)		
Total Points (out of 15 possible)		

Grading Scale:

Exemplary paper	Adequate paper	Marginal paper	Inadequate paper	Unacceptable/ No paper
13-15	10-12	7-9	1-8	0

Assignments
EDSE 517: Computer Applications for Special Populations
Scoring Rubric for Tutorial

Tutorial (20 points): Due on 4/26

Choose a piece of software (fairly recent version) or hardware of interest. Create a step-by-step tutorial for guiding a new user through **an activity** using the software or hardware application. Take the student through the entire sequence of events that comprise the activity (i.e. opening the program to closing it when done). Use of screen shots or photographs to guide the user of the tutorial will enhance the tutorial. Clear concise wording is expected and a troubleshooting section is typically helpful when creating a tutorial. **Tutorial should be prefaced with a one-paragraph description of the activity and the software/hardware being used. On the due date, students will present their tutorials to the class.**

Exemplary tutorial (16-20 points): ***Appropriate software or hardware chosen, easy to follow tutorial prefaced by a clear, concise description of the activity and the software/hardware being used. Screen shots or photographs included, as well as troubleshooting information (if applicable). Good writing style, free of mechanical or stylistic errors.***

Adequate tutorial (11-15 points): ***Good overall tutorial, lacking in one or two of the criteria for an exemplary tutorial. Not entirely easy to follow, or minor writing style errors may be present.***

Marginal tutorial (6-10 points): ***Overall acceptable tutorial, but with one or more significant problems. Contains some useful information, but may have substantial problems with guiding a new user with the software/hardware.***

Inadequate tutorial (1-5 points): ***Tutorial with substantial problems in important areas. May be difficult to follow and information may be inaccurate. Contains little or no information of value to special education practice.***

Unacceptable/No tutorial (0 points): ***Tutorial with no value whatsoever relative to the assignment, or no tutorial turned in at all. May describe a project of no value that was not approved for this assignment.***

Exemplary tutorial	Adequate tutorial	Marginal tutorial	Inadequate tutorial	Unacceptable/ No tutorial
16-20	11-15	6-10	1-5	0

TUTORIAL SCORING RUBRIC

NAME:_____

	Points	Comments
Appropriateness of hardware or software chosen (3 points)		
Screen shot or photos to guide user (5 points)		
Clear, concise wording, visually well organized (sufficient white space, easy to follow, etc.), completeness of directions. (5 points; 7 points if no troubleshoot paragraph)		
Troubleshooting paragraph (if applicable) (2 points)		
Paragraph describing software or hardware and the activity (5 points)		
Total Number of Points (20 possible points)		

Grading Scale:

Exemplary tutorial	Adequate tutorial	Marginal tutorial	Inadequate tutorial	Unacceptable/ No tutorial
16-20	11-15	6-10	1-5	0

Assignments
EDSE 517: Computer Applications for Special Populations
Scoring Rubric for Web Page

Web Page Design (25 points): Due on 5/17

For this project, students will design an instructional a web page and **save it to a CD.** Students will be using *Lectrora* during lecture/lab. A tutorial on *Lectora* will be provided in class. The web page may be about **any topic of instruction**, however some suggestions for this assignment include:

- Homework section for your class to visit to remind them of their assignments
- Review of daily/weekly activities for parents or students to visit
- Information to introduce/review an instructional unit
- Family page that provides updates and information to family members

With regard to accessibility, each web page should include:
Alt tags ("pop up text descriptors") on graphics and images
Sans serif font
Contrast and other visual considerations
Table formatting (if applicable)
Readability (sufficient white space, etc.)

With regard to creativity, each web page should be:
Inviting and easy to look at
Contain at least one image or graphic
Contain at least one paragraph of written information

With regard to content, each web page should contain:
Purpose of the site and site content
Information to be used by fellow employees, students, or parents regarding school topics
Language should be easily readable and understandable
Should have a "last updated" section and contact information ("foot note" on page)

Exemplary web page (20-25 points): ***Completely accessible web page that is easy to read and inviting to look at. The site meets the accessibility, creativity, and content criteria listed above. Good writing style, free of mechanical or stylistic errors.***

Adequate web page (14-19 points): ***Good overall web page, lacking in one or two of the criteria for an exemplary web page. Not entirely reflective or thoughtful, or minor writing style errors may be present.***

Marginal web page (9-13 points): ***Overall, acceptable but with one or more significant problems. Contains some useful information, but may have substantial problems with accessibility features, writing style, or design.***

Inadequate web page (1-8 points): ***Web page with substantial problems in important areas such as writing, accessibility, and overall thoughtfulness. Contains little or no information of value to special education practice.***

Unacceptable/No web page (0 points): ***Web page with no value whatsoever relative to the assignment, or no web page turned in at all.***

Exemplary web page	Adequate web page	Marginal web page	Inadequate web page	Unacceptable/ No web page
20-25	14-19	9-13	1-8	0

WEB PAGE SCORING RUBRIC

NAME:_____

	Points	Comments
Appropriateness of topic of instruction for web page 5 points		
Alt tags (pop-up text descriptions) on all graphics and images 3 points		
Sans serf font 2 points		
Contrast and other visual considerations 2 points		
Readability (sufficient white space, etc.) 2 points		
Inviting and easy to look at 1 points		
Contains at least one image or graphic 2 points		
Contains at least one paragraph of written information 2 points		
Statement of purpose of web page 2 points		
Contains information to be used by fellow employees, students or parents regarding school topics 2 points		
Language is easy to read and understand 1 points		
Includes “last updated” section and contact information as “foot note” 1 points		
Total (25 possible)		

Assignments
EDSE 517: Computer Applications for Special Populations
Scoring Rubric for Assistive/Instructional Technology Lesson

Assistive/Instructional Technology Lesson (25 points): Due on 5/31

Students will **design a lesson** using an instructional or assistive technology of their choice. Some examples of projects include:
Instructional web pages on using *Lectora*
Creating a math lesson using *Hyperstudio*
Creating a history lesson using *Powerpoint*
Creating a set of communication boards using *Boardmaker*
Creating a science lesson utilizing the digital microscope, digital camera, and *Powerpoint*
Adapting a book using *Intellipics* and *Intellikeys*
Creating a language arts lesson using *Inspiration* or *Kidspiration*
Creating a math lesson using *Microsoft Excel*
***(*PowerPoint* projects must be interactive, not just a series of static slides.)

Include a **lesson plan** that provides a brief overview, in a list or paragraph format, of the following points:
Lesson Topic and **Goal**
Content Area and **Grade Level**
Student Activities and **Materials** required for lesson
Lesson Modifications for students with special needs, if the lesson is not specifically designed for students with special needs. What types of software or hardware would support the students in doing this lesson? Be specific as to what special needs you are addressing.

Students will present their lessons to the class on the last night. Additionally, students will submit a one-page reflection about their thoughts while creating the lesson.

Exemplary lesson (20-25 points): ***Appropriate assistive/instructional technology chosen, use of advanced features of the software/hardware for lesson creation, thoughtful and creative method for presenting the lesson content material within the software/hardware; consideration of students with special needs. Detailed, yet concise reflection indicating the process and thoughts experienced while creating the lesson.***

Adequate lesson (14-19 points): ***Good overall lesson, lacking in one or two of the criteria for an exemplary lesson. Uses mostly basic software features. Reflection may be weak in areas such as details or reflective analysis of experiences.***

Marginal lesson (9-13 points): ***Overall, acceptable but with one or more significant problems, no advanced features of software/hardware used. Contains some useful information, but may have substantial problems with presentation, design, or explanation. Reflection may be weak in areas of description or reflective analysis.***

Inadequate lesson (1-8 points): ***Lesson with substantial problems in important areas such as content and ways in which software/hardware is used. Contains little or no information of value to special education practice. Reflection does not document thoughts or reflect the process of creating the lesson.***

Unacceptable/No lesson (0 points): ***Lesson with no value whatsoever relative to the assignment, or no lesson turned in at all. May describe technology of no value that was not approved for this assignment.***

Exemplary lesson	Adequate lesson	Marginal lesson	Inadequate lesson	Unacceptable/ No lesson
20-25	14-19	9-13	1-8	0

The final project will be returned to you at your base school through the interoffice courier or mailed to your home if you are not employed by Prince William County Schools.

ASSISTIVE/INSTRUCTIONAL TECHNOLOGY LESSON PLAN SCORING RUBRIC

NAME:_____

	Points	Comments
Appropriateness of assistive/instructional technology used (4 points)		
Use of advanced features of the software/hardware for lesson creation (2 points)		
Lesson Topic Goal Content Area Grade Level Student Activities Materials Needed (1 points each= 6)	 (total)	
Thoughtful and creative method for presenting the lesson content material within the software/hardware (5 points)		
Detailed but concise reflection indicating the process and thoughts experienced while creating the lesson (5 points)		
Consideration of students with special needs (be specific as to needs being addressed) (3 points)		
Total Number of Points (25 possible points)		