

George Mason University
Graduate School of Education
Special Education Program

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

Instructor: Jeff Sisk

Section # 608: 4:30 to 8:30 pm Tuesday

Location: Rocky Run MS, Room 150 (Assistive Technology Computer Lab)

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Office Hours: By appointment, Rocky Run MS, Room 149

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.

Nature of Course Delivery

Learning activities in this class will include the following:

1. Class lecture, discussion, and participation
2. Software and hardware presentations
3. Group and independent laboratory activities
4. Class presentations
5. Written papers using the American Psychological Association format (5th edition)

Student Outcomes

This course is designed to enable students to:

1. Describe a comprehensive set of procedures for software review and evaluation for specific populations
2. Implement a thorough set of procedures for software review and evaluation for specific populations
3. Describe key features to look for when performing software evaluation
4. Describe and utilize key software for specific populations
5. Demonstrate an ability to enhance written and/or spoken communication with a variety of technologies.
6. Demonstrate the use of technologies designed to aide in literacy activities

7. Demonstrate the use of different classroom management tools and discuss their applicability in different settings
8. Describe key features to look for when deciding on and using an augmentative and alternative communication device for an individual
9. Describe and utilize key devices and software tools designed to help individuals with sensory impairments
10. Describe and utilize key devices and software tools designed to help individuals with physical impairments
11. Describe a comprehensive yet brief understanding of the history of assistive technology
12. Describe and implement accessibility considerations for Internet design on own web page
13. Construct a classroom extension resource on the internet for use with a specific special education population.
14. Design an appropriate technology integrated lesson plan for a specific special education population

Expectations for students

1. 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.
2. 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.
3. Assignments should reflect graduate level work
4. Students are reminded of the George Mason University honor system that is in effect at all times.

College Of Education And Human Development Statement Of Expectations:

All students must abide by the following:

1. Students are expected to exhibit professional behavior and dispositions. See gse.gmu.edu for a listing of these dispositions.
2. Students must follow the guidelines of the University Honor Code. See http://www.gmu.edu/catalog/apolicies/#TOC_H12 for the full honor code.
3. 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.
4. 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.

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, and completion of in-class assignments handed in at the end of each class period. Each lab assignment is worth **2** points; the lowest grade or missed labs will be dropped from your final grade. **(20 points)**
2. **Software Review (Due 10/4)**: Students will choose a piece of 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. **(20 points)**
3. **Tutorial (Due 10/18)**: Students will create a step-by-step tutorial intended for guiding a new user with software or hardware selected for this assignment. 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. **Blackboard Design (Due 11/1)**: Students will be responsible for designing their own accessible web page using their Fairfax County Blackboard.com accounts. 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. **(15 points)**
5. **Assistive/Instructional Technology Lesson (Due 11/15)**: 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 Digital Drop Box by the start of class on the due date.

Grading Criteria

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

Tentative Class Schedule and Assignment Due Dates

Session Number	Date	Class Activities	Assignments and Due Dates
1	9/13	Lecture and Lab: Introduction to AT	
2	9/20	Lecture and Lab: Software Features and Evaluation. Technology Tools for Teachers.	
3	9/27	Lecture and Lab: AT for Students with Learning Disabilities – Writing Tools	
4	10/4	Lecture and Lab: AT for Students with Learning Disabilities – Math Tools. Research to Support the Use of Assistive Technology.	Software Review Due
5	10/11	Lecture and Lab: AT for Students with Learning Disabilities – Reading Tools	
6	10/18	Lecture and Lab: AT for physical impairments	Tutorial Due; Student Presentations
7	10/25	Lecture and Lab: Using the Internet for Instruction and Web Page Design	
8	11/1	Lecture and Lab: AT for Students with Sensory Impairments	Blackboard Assignments Due; Student Presentations
9	11/8	Lecture and Lab: Visual Strategies and Augmentative Communication	
10	11/15	Topics Determined by Class Interests/Instructional Technology Lesson Plan 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 (20 points): Due on October 4th

Choose a piece of software of interest 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 2-3 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 (16-20 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 (11-15 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 (6-10 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 (1-5 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
16-20	11-15	6-10	1-5	0

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

Tutorial (20 points): Due on October 18th

Choose a piece of software (fairly recent version) or hardware of interest. Create a step-by-step tutorial for guiding a new user through a classroom use of the software or hardware application. 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 software/hardware. **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 software/hardware. 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

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

Blackboard.com Design (15 points): Due on November 1st

For this project, students will plan and develop a Blackboard course site for integrated classroom use. Students will access the Fairfax County Public Schools blackboard server to design their site. <http://fcps.blackboard.com> It is the student's responsibility to request a course to be developed, research, structure and implement accessibility features for the website. Blackboard development materials will be provided in class. The website may be integrated into your classroom according to student need and some suggestions may include:

- ❖ Homework sections for your class to visit to remind them of their assignments
- ❖ Review of daily/weekly activities for parents or students to visit
- ❖ Discussion boards or virtual chats on a scheduled basis for help away from the classroom
- ❖ Tests developed to assess academic materials

With regard to accessibility, consideration should be given for the following:

- Navigation buttons allowing easy access to course materials
- Elimination of unused buttons and course content areas
- Elimination of unused faculty and student tools
- An appropriate color scheme and button style for the course
- Convenient accessibility for student populations and/or parents

With regard to content, each web page should contain:

- A clear purpose of the site and site content
- Three examples of posted written information to be used by fellow employees, students or parents regarding school topics
- Should be easily readable and understandable
- Should have faculty contact information
- Should contain at least three external links to content related web resources
- Should have at least three documents attached as links of downloadable content to be used by fellow employees, students or parents regarding school topics
- Appropriate access given to communication and assessment tools as required by the site's audience

On the due date, students will present their Blackboard site to the class and will provide student access to the instructor. Student access for the instructor must be provided in order for the instructor to view and grade the assignment. Late projects will be penalized.

Hint: Do not wait to provide instructor access to your Blackboard site until the due date; this process can often be confusing and waiting until the 'last minute' can often result in frustration!

Exemplary Blackboard site (13-15 points): *Completely accessible Blackboard that is easy to read and inviting to look at while being free of unused content sections. The site meets the accessibility, creativity and content criteria listed above. Good writing style, free of mechanical or stylistic errors.*

Adequate Blackboard Site (10-12 points): *Good overall Blackboard site, 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 Blackboard Site (7-9 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 Blackboard Site (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 Blackboard Site (0 points): *Web page with no value whatsoever relative to the assignment, or no web page turned in at all.*

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

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

Assistive/Instructional Technology Lesson (25 points): Due on November 15th

Students will **design a lesson** using an instructional or assistive technology of their choice. Some examples of projects include:

- Creating a math lesson integrating an Internet resource
- Creating a history lesson integrating digital images, digital sounds and digital video in a PowerPoint slide design
- Creating a set of communication boards using Speaking Dynamically Pro or 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

Include a **lesson plan** that provides a brief overview, in a list or paragraph format, of the following points:

- **Lesson Topic and Goal.** (This goal may be a Virginia State Standard of Learning.)
- **Content Area** and appropriate **Grade Level**
- **Student Activities and/or Procedures** for the entire lesson
- **Materials** required for lesson including all technology used
- **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 (15-20 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 (10-15 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 (1-9 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	15-20	10-15	1-9	0