

George Mason University
Graduate School of Education
Special Education Program

**EDSE 517: Computer Applications for Special Populations
Course Syllabus – Spring 2004**

Instructor: Cynthia Feist

Section # 001: 4:30 to 7:10 pm Thursday

Section # 002: 7:20 to 10:00 pm Thursday

Location: Thompson Hall, Room 221 (Assistive Technology Computer Lab)

Phone: 703-993-3670

Email: cfeist@gmu.edu

Office Hours: By appointment, Krug Hall, Room 105

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:

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 proficiency in a variety of technologies utilized to enhance written and/or spoken communication
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. 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:

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)

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.

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 **1.5** points; the lowest two grades or missed labs will be dropped from your final grade. **(20 points)**
2. **Software Review (Due 2/19)**: 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. **(15 points)**
3. **Tutorial (Due 3/18)**: 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. **Web Page Design (Due 4/15)**: Students will be responsible for designing their own accessible web page using their George Mason University 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. **(25 points)**
5. **Assistive/Instructional Technology Lesson (Due 5/3)**: 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. **(20 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	1/22	Lecture and Lab: Introduction to AT	
2	1/29	Lecture and Lab: Software features and evaluation	
3	2/5	Lecture and Lab: Technology tools for teachers	
4	2/12	Lecture and Lab: AT for early childhood	
5	2/19	Lecture and Lab: AT for students with learning disabilities - Writing tools	Software Review due
6	2/26	Lecture and Lab: AT for students with learning disabilities - Reading tools	
7	3/4	Lecture and Lab: AT for students with physical impairments	
	3/11	Spring Break	
8	3/18	Lecture and Lab: Using the Internet for instruction	Tutorial due; Student presentations
9	3/25	Lecture and Lab: Designing web pages for content and accessibility; Software to create and post web pages; Dreamweaver tutorial	
10	4/1	Lab: Work on web pages	
11	4/8	Lecture and Lab: AT for students with sensory impairments	
12	4/15	Lecture and Lab: Intellitools	Uploaded Web Page due; Student presentations
13	4/22	Lecture and Lab: Augmentative and alternative communication	
14	4/29	Topic(s) to be determined by class interests	
15	5/3	Assistive/ Instructional Technology Lesson 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 2/19

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 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

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

Tutorial (20 points): Due on 3/18

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

Web Page Design (25 points): Due on 4/15

For this project, students will design and upload an accessible web page on their George Mason University accounts. Students may choose to use Dreamweaver, Front Page, Netscape Composer, or any other web designing software of their choice. However, it is the student's responsibility to research and implement accessibility features for the software chosen. A tutorial on Dreamweaver will be provided in class. The web page may be about any topic of interest, however some suggestions for this page 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
- Photographs and information about hobby or something of interest
- Family page that provides updates and information to family members

With regard to accessibility, each web page should include:

Alt tags on graphics and images
Sans serif font
Contrast and other visual considerations
Table formatting (if applicable)
Readability

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
Should be easily readable and understandable
Should have a "last updated" section and contact information

On the due date, students will present their web pages to the class and will submit the URL (web address) to the instructor. The web page must be uploaded to the web in order for the instructor to view and grade the assignment. Late projects will be penalized. *Hint: Do not wait to upload your web page until the due date; this process can often be confusing and waiting until the 'last minute' can often result in frustration!*

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

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

Assistive/Instructional Technology Lesson (20 points): Due on 5/3

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

- Creating a math lesson using Hyperstudio
- Creating a history lesson using Powerpoint
- 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**
- **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 (16-20 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 (11-15 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 (6-10 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 (1-5 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
16-20	11-15	6-10	1-5	0