

George Mason University
College of Education and Human Development
Special Education

EDSE: 517: Computer Applications for Special Populations (3 Credit Hours)
Course Syllabus – Summer 2008

Instructor: Mark Nichols, M.Ed.

Section: 635

Time: 4:30 – 9:00 Tuesdays

Dates: June 10, 2008 – July 29, 2008

Location: LCPS Administration Building (Room 420/421) and STC AT Lab (Room 5)

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Office Hours: Face-to-Face: By appointment only

Virtual: Via Blackboard Chat Room (9-5p.m.).

COURSE DESCRIPTION

This course is a lecture/laboratory course providing understanding of computer technology (software and hardware) 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 various educational settings.

Most course information, lectures, and readings will be posted on Blackboard prior to the start of class at <http://courses.gmu.edu>. Additional readings will be handed out in class. For support in using Blackboard CE6 please visit <http://irc.gmu.edu/ce6transition>.

REQUIRED MATERIALS:

1. Portable USB storage device (also known as jump/thumb drives)
2. Sign up on QIAT listserv (www.qiat.org) (students will be expected to post messages and comments on topic threads of interest throughout the course). It is strongly advised that a separate email account be setup solely for this listserv. This can be accomplished by using one of the many free online email clients such as Yahoo, Google, Hotmail, etc.

RECOMMENDED MATERIALS:

- 2008 Closing the Gap Resource Directory (www.closingthegap.com)

SUPPORTING RESOURCES:

- All course web links are available at the following location: <http://del.icio.us/EDSE517>. Students are expected to review web resources prior to the start of the respective class session.

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

STUDENT OUTCOMES

Upon course completion, student will be able to:

1. Demonstrate proficiency in base laws and regulations that govern the use of Assistive Technology (AT) and the responsibilities associated with the use of AT.
2. Explain the framework for Universal Design for Learning (UDL) and application of the framework within the classroom.
3. Describe and implement a comprehensive set of procedures for software review and evaluation for specific populations.
4. Demonstrate knowledge of basic and advanced features within the Microsoft Office Suite and applicability of the tools within the classroom.
5. Describe and utilize key devices and software tools designed to help individuals with disabilities in educational settings including learning, physical, sensory, and intellectual disabilities.
6. Demonstrate proficiency in a variety of technologies utilized to enhance written and/or spoken communication.
7. Describe key features to look for when deciding on and using an augmentative and alternative communication system/device for an individual.
8. Evaluate and select the latest appropriate web-based technologies to support student instruction.
9. Research assistive technologies and describe the impact of the technology on society.
10. Explain various Web 2.0 technologies and ideas for integration within the classroom.
11. Design an appropriate technology integrated lesson plan for a specific special education population.

RELATIONSHIP OF COURSES TO PROGRAM GOALS

This course is part of the George Mason University, Graduate School of Education, Special Education Program for teacher licensure in the Commonwealth of Virginia. This program complies with the standards for teacher licensure established by the Council for Exceptional Children, the major special education professional organization. As such, the learning objectives for this course cover many of the competencies for learning environments and social interactions.

ASSESSMENT OF COURSE REQUIREMENTS

All assignments should be word-processed and are due at the start of class on the dates indicated. Submission of all assignments is due in both hardcopy and electronic format (via the digital drop box in Blackboard or e-mail to the instructor). Consult with the instructor in advance if there is a problem. In fairness to students who make the effort to submit assignments on time, there will be a 10% point reduction per day for late papers. (For example, a 20-point assignment will lose 2 points per day while a 50-point assignment will lose 5 point per day.) Please retain a copy of your assignment in addition to the one you submit. All assignments should reflect graduate-level spelling, syntax, and grammar. At the instructor's discretion, students may be given the opportunity to resubmit an assignment. Resubmitted assignments are not eligible for full credit.

It is recommended that students retain ELECTRONIC copies of all course products to document their progress through the GSE ED/LD/MR and/or SD licensure program. Products from this class can become part of your individual professional portfolio used in your portfolio classes that documents your satisfactory progress through the GSE program and the CEC performance based standards.

NOTE:

If you need course adaptations or accommodations because of a disability or if you have emergency medical information to share or need special arrangements, **please call and/or make an appointment with the first week of class.**

COURSE EXPECTATIONS

1. Students are expected to attend class sessions on time, stay for the duration of the class, and actively participate in group discussions and activities. Absences will result in missed lab assignments and decreased class participation points.
2. During class time, computer and printers are to be used only for work related to the class. Students found using the computer (whether personal laptop or lab computer) for purposes other than the assigned in class activity will be asked to turn off their equipment and will not receive participation points for that class session.
3. Use APA guidelines for all course assignments. This website links to APA format guidelines. <http://www.psywww.com/resource/apacrib.htm>. In particular, it is expected that you know how to paraphrase and cite information appropriately to meet both APA guidelines and to avoid plagiarism. This website provides some useful information on how to avoid plagiarism in your writing. <http://www.collegeboard.com/article/0,3868,2-10-0-10314,00,html>.
4. We will use person-first language in our class discussions and written assignments. Please refer to “Guidelines for Non-Handicapping Language in APA Journals” <http://www.apastyle.org/disabilities.html>
5. Please subscribe to the GMU/GSE Special Education list serve. Send an email to listserv@listserv.gmu.edu and type the following in the subject line of the message: subscribe (SPECIAL-EDUCATION-PROGRAM-L) (your full name). For example: subscribe SPECIAL-EDUCATION-PROGRAM-L John Doe. Upon sending the e-mail request, you will receive an email confirmation of your subscription to the list. This allows you to receive important notices from special education.

ASSIGNMENTS AND EVALUATIONS

Students will be evaluated on the following:

- 1. Class and Lab Participation (25 points)** Attendance at all sessions is very important because many of the activities in class are planned in such a manner that they cannot necessarily be recreated outside of the class session. Class and lab participation is demonstrated by participation and utilization of lab time in an effective manner and completion of in-class assignments provided to the instructor at the end of each class period. Students will be awarded up to 3.125 points each class session for successful completion of in class activities. Students who miss a class will not have the opportunity to make up missed in-class assignments, and therefore, will not earn class participation points for that missed class session. Significant tardiness or early departure will also count as an absence. Students may earn a maximum of 25 points for participation.
- 2. Blackboard Discussion Board/Blog Participation (5 points)** Students will be expected to contribute and comment to the discussion board and/or Web log entries located within the Blackboard discussions tab following the conclusion of various class sessions. Students may earn a maximum of 5 points for participation.
- 3. Software Review (15 points: Due 6/17):** Students will choose a piece of software to review; it should be a recent version (when possible) and a title that students are not currently familiar with. The review includes two elements, (1) a written narrative with an embedded screen shot of the software application and (2) a completed software evaluation checklist. The narrative should provide a brief description of the software followed by a thorough review of the software and its

possible application within a chosen environment. The review should 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 review should be 2-3 pages in length and will serve as a reference for a potential software user. Students will use the software review format introduced in class to evaluate the selected software. Please include a copy of your completed evaluation checklist as an Appendix. Please refer to the scoring rubric for additional information on this assignment.

- 4. Teacher Productivity Assignment (5 Points: Due 7/1):** Students will select a teacher productivity tool such as Microsoft Excel, Word, PowerPoint or Access and develop an artifact that will be useful to them as a teacher in the classroom. For instance, using Microsoft Word students can create an interactive digital form or they can create graphical charts in Excel for data representation. Please refer to the scoring rubric for additional information on this assignment
- 5. Technology Tools Assignment (15 Points: Due 7/15):** Students will select a broad technology category to research, describe and analyze. A list of technology categories (i.e. word prediction) will be provided by the instructor. Students will then select two specific technologies within their category (i.e. CoWriter and WordQ) as part of their analysis. In a 3 to 4 page paper, students should provide a description of the overall technology including its intended purpose, audience, and important features. Students then should provide a brief description of each specific technology they have selected along with a comparison of product similarities and differences. Finally the paper should include a recommendation for one of the specific technologies based on the needs of a real client or an invented scenario. Please note: it is anticipated that students will use the Internet and/or product catalogs to obtain product information and descriptions, however students are expected to reference such information using proper APA format including correct referencing both within the narrative and in the reference list. Please refer to the scoring rubric for additional information on this assignment. **NOTE: Software titles selected for the software review assignment may not be used to complete the technology tools assignment.**
- 6. Assistive/Instructional Technology Lesson (35 Points: Due 7/29):** Students will design an interactive computer-based lesson that has been adopted for a specific population and includes on-line and off-line products. This lesson should integrate instructional and assistive technology and should engage students actively with the technology. Students will write a lesson plan in paragraph or bulleted format addressing all the required elements provided by the instructor and create an on-line and off-line product to be used in the lesson. The lessons will be presented the last day of class. Please refer to the scoring rubric for additional information on this assignment.

The AT/IT Lesson plan has been designated as the 517 signature assignment. The signature assignment required for this course must be submitted electronically to Mason's NCATE management system, TaskStream: (<https://www.taskstream.com>).

Grading Scale

95-100 = A	80-82 = B-
90-94 = A-	70-79 = C
86-89 = B+	<70 = F
83-85 = B	

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT STATEMENT OF EXPECTATIONS:

All students must abide by the following:

- Students are expected to exhibit professional behavior and dispositions. See <http://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 to DRC.

- DRAFT - Class Schedule and Assignment Due Dates

Session	Date	Class Activities	Assignments Due
1	6/10	Lecture and Lab: Introduction to AT / UDL Lecture and Lab: Software Evaluations	
2	6/17	Lecture and Lab: Microsoft Accessibility Lecture and Lab: The Power of Microsoft (Word)	Software Review
3	6/24	Lecture and Lab: The Power of Microsoft (PPT) Lecture and Lab: Digital StoryTelling	
4	7/1	Lecture and Lab: AT Writing Tools Lecture and Lab: AT Reading Tools	Teacher Productivity Assignment
5	7/8	Lecture and Lab: Using the Internet as a Teaching Tool Lecture and Lab: Web 2.0 Resources	
6	7/15	Lecture and Lab: Augmentative and Alternative Communication Lecture and Lab: AT and Math	Technology Tools Assignment
7	7/22	Lecture and Lab: AT for Students with Physical Impairments Lecture and Lab: Curriculum Authoring Tools	
8	7/29	Lecture and Lab: AT for Students with Sensory Impairments * GMU AT Lab? Class Presentations!	Assistive/Instructional Technology Lesson Presentation

Assignments – Summer 2008
EDSE 517: Computer Application for Special Populations
Scoring Rubric for Software Review

Software Review Paper (15 Points): Due on June 17, 2008

Students will choose a piece of software to review; it should be a recent version. The review includes two elements, a written narrative and a completed software evaluation checklist. The narrative should provide a brief description of the software followed by a thorough review of the software and possible application within a chosen environment. The review should 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 review should be 2-3 pages in length and will serve as a reference for a potential software user. Students will use the software review format introduced in class to evaluate the selected software. Please include a copy of your completed evaluation checklist as an Appendix. This document has been uploaded to Blackboard as a separate attachment. Please refer to the scoring rubric for additional information on this assignment.

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

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 by people with disabilities. Includes completed software evaluation tool in Appendix, good writing style, free of mechanical or stylistic errors. 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.

Assignments – Summer 2008
EDSE 517: Computer Application for Special Populations
Scoring Rubric for Teacher Productivity Tools

Teacher Productivity Tools Assignment (5 points): Due on July 1, 2008

Students will select a teacher productivity tool such as Microsoft Excel, Word, or PowerPoint and develop an artifact that will be useful to them as a teacher in the classroom. For instance, using Microsoft Excel students can create a grade sheet for a class that they teach or might be teaching or they can create an interactive worksheet or quiz using Microsoft Word.

Exemplary Project	Adequate Project	Marginal Project	Inadequate Project	Unacceptable/No Project
5 points	4 points	3 points	2 points	1-0 points

- Exemplary project (5 points): Meets all criteria – Appropriate technology chosen and well developed supportive artifact. The end product should be relatively easy to use and a complete functional product.
- Adequate project (3 points): Good overall project, lacking in one or two of the criteria for an exemplary project.
- Marginal project (2 points): Lacking in three of the criteria
- Inadequate project (1 points): Substantial problems, lacking in four or more of the criteria
- Unacceptable/No project (0 points): No project turned in

Assignments – Summer 2008
EDSE 517: Computer Application for Special Populations
Scoring Rubric for Technology Tools Assignment

Technology Tools Assignment (15 points): Due on July 15, 2008

Students will select a broad technology category to research, describe, and analyze. A list of technology categories (i.e. word prediction) will be provided by the instructor. Students will then select two specific technologies within their category (i.e. CoWriter and WordQ) as part of their analysis. In a 2-3 page paper, students should provide a description of the overall technology including its intended purpose, audience, and important features. Students then should provide a brief description of each specific technology they have selected along with a comparison of product similarities and differences. Finally the paper should include a recommendation for one of the specific technologies based on the needs of a real client or an invented scenario. Please note: it is anticipated that students will use the Internet and/or product catalogs to obtain product information and descriptions, however students are expected to reference such information using proper APA format including correct referencing both within the narrative and in the reference list.

Students may choose to use the AbleData product database (<http://www.abledata.com/>) to research their selected technology topic. The topics provided in the assignment description on Blackboard include some of the major technology categories from AbleData. Students wishing to research other technology categories not included in this list are encouraged to do so with approval from the instructor. **Please note the AbleData database does not remove old and discontinued products from their database. Therefore, you will need to check vendor websites and/or catalogs to ensure that products are still current. The paper should only include current and available products.**

Grading:

Exemplary project	Adequate project	Marginal project	Inadequate project	Unacceptable/ No project
13-15	9-12	8-11	4-7	0-3

Exemplary paper (13-15 points): Appropriate technology chosen, clear description of the overall technology including intended purpose, audience, and important features. Brief description of two specific technologies along with a description of similarities and differences of the two specific technologies. Student recommendation of one piece of technology based upon needs of a real client or an invented scenario (includes description of real client or invented scenario).

Adequate paper (9-12 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 (8-11 points): Overall acceptable paper, but with one or more significant problems. Contains some useful information, but may have substantial problems with synthesis/evaluation, writing style, or design.

Inadequate paper (4-7 points): Paper with substantial problems in important areas such as writing, description of the technology, synthesis/evaluation of the technology, overall thoughtfulness. Contains little or no information of value to special education practice.

Unacceptable/No paper (0-3 points): Paper with no value whatsoever relative to the assignment, or no paper turned in at all. May describe technology of no value that was not approved for this assignment. Paper included information from other references/sources that was not properly cited in the paper and/or reference list.

TECHNOLOGY TOOLS SCORING RUBRIC

NAME: _____

Technology Chosen: _____

	Points	Comments
Appropriateness of technology chosen (1 point)		
Description of overall technology: - Intended purpose - Audience - Important features (3 points)		
Brief description of each piece of software (3 points)		
Compare/contrast the two pieces of software (similarities and differences) (3 points)		
Recommendation of one piece of software to meet specific needs of a student or invented scenario. (3 points)		
General grammar / formatting (2 points)		
Total Number of Points (15 possible points)		

NOTE: Papers including information from other references/sources that was not properly cited in the paper and/or reference list will receive 0 points for the assignment.

Assignments – Summer 2008
EDSE 517: Computer Application for Special Populations
Scoring Rubric for Assistive/Instructional Technology Lesson

Assistive/Instructional Technology Lesson (35 Points): Due on July 29, 2008

Students will design an interactive computer-based lesson that has been adapted for a specific population and includes on-line and off-line products. This lesson should integrate instructional and assistive technology and should engage students actively with the technology. Students will write a lesson plan in paragraph or bulleted format addressing all the required elements provided by the instructor and create an on-line and off-line product to be used in the lesson. Students will present the lesson and their products on the last day of class.

Assignment Components

A. Lesson Plan Narrative and On-line Product (20 Points)

- **Lesson Plan Narrative:** Students will write a lesson plan in paragraph or bulleted format that addresses the following points:
 - Lesson Topic and Goal to include SOL or ASOL objective
 - Content Area and Grade Level
 - Materials
 - Student Activities: this section should be based on using the on-line product which has been designed for a specific population.
 - Sample Assessment
 - Extension ideas
 - Explanation of on-line product: identify and explain your design choices based on the needs of the specific population for whom this lesson is designed
 - Specific options for differentiating this lesson: (How can the lesson be adapted to serve multiple populations? Identify assistive technology devices and strategies for students with cognitive, physical, sensory, communication, and learning/emotional disabilities. For each population, include a brief explanation as to why you would consider the assistive technologies you mention.

Students will submit a written copy of the lesson plan to the instructor. Students should also submit a copy of this assignment (including the on-line product) to Blackboard for the instructor's records.

- **On-line Product:** The on-line product should be a computer file, webquest, etc. that you have created. If you use the Internet in your lesson, you should also include an accompanying computer file, which you create and with which the students interact. Students will submit the on-line product used in the lesson via Blackboard.

- B. Off-line Product (10 points):** Computers can be used to create assistive technology tools and strategies that support students during non-computer-based activities. The off-line product should be designed and used as part of the lesson with the same population as the on-line product. The off-line product should support or extend the goal(s) of the lesson. The off-line adaptation should integrate multiple assistive technology strategies (i.e. color, font, layout,

texture). Examples of off-line products include a printed PowerPoint storybook that has been adapted with manipulatives or tactile accents or a visual story map template. The off-line product should be referred to in the lesson plan itself either in the activities, assessment, or extension sections.

As a separate document, write a brief (1 page) narrative that describes the purpose of the adaptation, how it was developed, the AT strategies it incorporated, and how it can be integrated into the lesson to benefit students with disabilities.

- C. **Presentation** (3 Points): Students will present their lesson plan on the last day of class. Include the lesson topic and goal(s), the grade level and content area, and a summary of the materials and procedures. Explain the adaptations you made and your reasons for selecting the adaptations. Have your on-line and off-line products available for classmates to see. Explain the connection between the on-line and off-line products. Students may choose to develop a PowerPoint presentation as part of their presentation, but are not required to.

NOTE: The lesson should include an on-line (ex. computer file) and off-line (i.e. hard copy) product. Lessons that use the Internet must also include an on-line product you create. Your off-line product should not simply be your on-line product printed out.

Grading:

Exemplary project	Adequate project	Marginal project	Inadequate project	Unacceptable/ No project
32-35	31-28	27-25	1-24	0

Exemplary lesson (32-35 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 including student interactivity with the technology; consideration of students with special needs. Detailed, yet concise (can be bulleted format instead of paragraph narrative) lesson plan submitted to instructor. Includes on-line and off-line products appropriately integrated into the lesson with clear justification for assistive technology decisions.

Adequate lesson (31-28 points): Good overall lesson, lacking in one or two of the criteria for an exemplary lesson. Uses mostly basic software features. Lesson plan may be weak in areas such as thoughtful reflection on lesson modifications for students with special needs. Includes on-line and off-line products appropriately integrated into the lesson but offers an incomplete justification for assistive technology decisions.

Marginal lesson (27-25 points): Overall, acceptable but with one or more significant problems, no advanced features of software/hardware used and/or the lesson is not interactive. Contains some useful information, but may have substantial problems with presentation, design, or explanation. Lesson plan format and/content may be weak in describing basic components such as identifying lesson goals and objectives, student activities and lesson materials. Justification for assistive technology decisions may be unclear. The off-line product does not clearly relate to the lesson.

Inadequate lesson (1-24 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. Written lesson plan does not document the process of creating the lesson. No on-line or off-line product turned in and/or justification provided.

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.

