

**SPED 4040 & SPED 4040L**  
**SPECIAL EDUCATION TECHNOLOGY**  
**SPRING, 2004**

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**Course Goal**

This course and the accompanying lab will assist you in gaining information and skills for managing, assessing, and teaching individuals with disabilities using multiple computer operating systems and a variety of assistive technology devices. Specifically, this course will present information to help you to: (1) develop strategies for integrating computer-based instruction (CBI) into your work as teachers; (2) describe strategies for minimizing multicultural biases regarding technology access; (3) explain the relationship between situated cognition, anchored instruction, and instructional integrated media; (4) use instructional multimedia to improve the quality of your instruction; and (5) incorporate into your work the use of assistive and augmentative devices as well as low end technologies. The emphasis of the course will be on technology solutions for students with mild disabilities (MIMR, LD, BD). Additionally, information will be presented on assistive technology for students with more severe disabilities and those with physical and sensory deficits.

**Course Competencies**

The competencies that drive this course come from two professional organizations. The Council for Exceptional Children (CEC) and the International Society for Technology in Education (ISTE) have developed competencies that are relevant to your basic knowledge as a beginning teacher. CEC competencies relate directly to teaching students with disabilities. The ITSE standards were designed for general educators, however, they are critical for all teachers and they have modified them to account for work with students who have disabilities. Some of the competencies below are keyed to the CEC international standards for special education teachers. Other competencies are keyed to the six goal areas identified by ITSE: (I.) Technology operations and concepts; (II.) Planning and Designing Learning Environments and Experiences; (III.) Teaching, Learning, and the curriculum; (IV.) Assessment and Evaluation; (V.) Productivity and Professional Practice; (VI.) Social, Ethical, Legal, and Human Issues.

1. Design and evaluate the quality of plans that incorporate the use of technology, including adaptive and assistive technology for young children with special needs, and school aged students who have mild/moderate mental retardation, learning disabilities, and behavior disorders. (CEC – IGC, 4S21, EC 5S2, BD 4S5, MR 4K2)
2. Design and evaluate the quality of plans that incorporate the use of technology, including adaptive and assistive technology for young children with special needs, and school aged students who severe and/or multiple disabilities. (CEC – IGC, 5K3, EC 5S2, BD 4S5, MR 4K2)
3. Articulate and analyze strategies for integrating alternative and augmentative communication systems into the curriculum for students with communication difficulties. (CEC - IGC, 4S18, 4S19, 6K4, MR 4S7)
4. Demonstrate appropriate use of technology including adaptive and assistive technology (CEC- EC 4S9, ITSE - VI)
5. Design and evaluate the quality of plans that incorporate the use of technology, including adaptive and assistive technology for individuals with physical disabilities and for those with sensory deficits (CEC-IGC, 3S4, PH – 4K2, VI – 4K1, 4K2, DH – 4K3).
6. Demonstrate proficiency in the use of common input and output devices including assistive devices for students who have disabilities; solve routine hardware and software problems; and make informed choices about technology systems, resources, and services. (ITSE - I)
7. Use technology tools and information resources to increase productivity, promote creativity, and facilitate academic learning as well as to use resources to facilitate higher order and complex thinking skills, including problem solving, critical thinking, informed decision-making, knowledge construction, and creativity. (ITSE - I, III, IV, V)
8. Use technology to locate, evaluate, and collect information from a variety of sources on topics related to improving teaching of students who have disabilities and to use technology in the development of strategies for solving problems in the real world. (ITSE – I, III, IV, V)
9. Evaluate and select new information resources and technological innovations based on their appropriateness for teaching students with disabilities. (ITSE - I, III, IV, V)
10. Demonstrate an understanding of the legal, ethical, cultural, and societal issues related to technology use with individuals who have disabilities and their families and be able to discuss diversity issues related to electronic media. (ITSE – I, VI)
11. Identify the benefits of technology to maximize student learning and facilitate higher order thinking skills in students who have mild to moderate disabilities. (ITSE - I, III)

12. Differentiate between appropriate and inappropriate uses of technology for teaching and learning while using electronic resources to design and implement learning activities. (ITSE - II, III, V, VI)

13. Identify technology resources available in schools and analyze how accessibility to those resources affects planning for instruction and the inclusion of students who have disabilities. (ITSE - I, II)

14. Identify, select, and use hardware and software technology resources specially designed for use by PK-12 students to meet specific teaching and learning objectives and determine how these resources can be modified to meet the needs of students with disabilities. (ITSE - I, II)

15. Identify specific technology applications and resources that maximize student learning, address learner needs, and affirm diversity. (ITSE - III, VI)

16. Design and teach technology-enriched learning activities that connect content standards with student technology standards and meet the diverse needs of students who have disabilities. (ITSE - II, III, IV, VI)

17. Plan and teach student-centered learning activities and lessons in which students apply technology tools and resources. (ITSE - II, III)

18. Research and evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information resources to be used by students or to be used by teachers to improve their knowledge base. (ITSE - II, IV, V, VI)

19. Examine multiple strategies for evaluating technology-based student products and the processes used to create those products. (ITSE - IV)

20. Develop a portfolio of technology-based products from coursework, including the related assessment tools. (ITSE - IV, V)

21. Apply online and other technology resources to support problem solving and related decision-making for maximizing student learning. (ITSE - III, V)

22. Participate in online professional collaborations with peers and experts relating to topics in the field of special education. (ITSE - III, V)

23. Use technology productivity tools to complete required professional tasks and identify technology-related legal and ethical issues, including copyright, privacy, and security of technology systems, data, and information. (ITSE - VI, V)

24. Identify issues related to equitable access to technology in school, community, and home environments and link these issues to problems faced by a diverse group of families who have children with disabilities. (ITSE - VI)

## **Overview of Topics \***

1. Definition of assistive technology--Legislative and legal mandates (objectives 3, 4 & 5)

Approximately 1/2 week

2. Cultural diversity, gender and assistive technology (objective 24)

Approximately 1/2 week

3. Assistive technology for access and control includes: relating to curriculum for students with severe disabilities and/or sensory deficits---examples of input and control devices, environmental controls and communication devices – link to severe disabilities, sensory deficits, and physical disabilities---Includes universal design (objectives 3, 4, 5, 6, & 24)

Approximately 3 weeks

4. Routine trouble shooting of hardware and software problems (objective 6)

Approximately 3 weeks spread out over the semester

5. Learning characteristics of students with disabilities and the link to constructivist, direct instruction (objectives 7, 8, 9, 11, 14, 17)

Approximately 3 weeks

6. Productivity software for teaching including web-based instruction –include teaching using scoring rubrics

Approximately 3 weeks and Ongoing

- Student productivity and learning (objectives 7, 8, 14, 15, 17, 18, 19, 20, 21)
- Teacher productivity and learning (objectives 22, 23)

7. Develop and evaluate the quality of technology plans (young children, MR, LD, BD and high incidence/low incidence disabilities) – Link to technology integration (objectives 1 & 2, 14, 20)

Approximately 1 week spread out over the semester

## **Portfolio Component**

8. Assistive technology for helping students to participate in the general education curriculum – i.e. content standards (objectives 16, 17, 18, 20, 21), and social skills--- includes web-based instruction, matching software to student learning characteristics and determining quality of software---links instruction to Gagne’s Events of Instruction

Approximately 5 weeks

**Portfolio Component** (Instructional plan, including either HS or PP project)

**\* See Class Schedule (Separate document on the WEB CT companion site for this course) for a complete listing by class period of all topics, sub-topics and readings.**

### **Course Format**

The course format includes lecture, testing, prepared products, classroom activity/participation, and laboratory activities/practice. This course stresses the need to use **cooperative learning teams** when teaching students who have disabilities and many of the assignments this semester reflect this approach. Class lectures will supplement information from the assigned readings. **You will be responsible for completing the readings prior** to the lecture and are responsible for any questions about the readings presented by the instructor.

### **Course Readings**

Belson, S.I. (2003). Technology for exceptional learners. Boston: Houghton Mifflin Company.

### **Class Schedule and Reading Assignments**

Each class includes time allotted for lecture, demonstration, group work, and lab activities. **The class schedule and reading assignments can be found as another file on the WEB CT companion site for this course.**

#### Tuesday class periods:

Section A: 12:30 PM to 2:30 PM (228 Aderhold)

Section B: 2:45 PM to 4:45 (228 Aderhold)

#### Thursday class periods (Includes Lab):

Section A: 12:30 PM to 2:15 PM (228 Aderhold)

Section B: 2:30 PM to 4:15 (228 Aderhold)

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## Tests, Projects and Grading Procedures

1. Class Participation (50 points). The instructor will award class participation points based on his professional judgment over the following student behaviors:

- Attending class regularly and on time
- Coming to class prepared by completing the assigned readings
- Synthesize information read and apply that information to problems and situations presented in class
- Orally answer questions that have been presented in class and contribute to discussions
- Demonstrate a strong work ethic common among outstanding teachers that includes practice with software outside of class times, review of web sites related to assistive technology, and review of software.
- Work as hard on practice assignments as on graded assignments
- Demonstrate professional behaviors and attitudes relating to classmates, the instructor and the work required as part of this course

2. Quizzes (100 points). **Timed, unannounced** quizzes may be presented at the beginning of each class session. Quizzes are designed to assist students in assessing their preparation for class (completing assigned readings, studying class notes) and to determine whether they are mastering course content to date. Questions for the quizzes will be multiple choice as well as true/false and will cover material from the assigned readings for that day, past readings, and notes from previous class lectures. **There will be no opportunity to make up a missed quiz due to absence or tardiness.**

3. Project 1: AT Applications for Students with Severe Disabilities (50 points).

This assignment is an individual project that results in a technology plan covering on the topics listed below.

Choice A: Technology plan for integrating AT into the curriculum for a student with severe disabilities to include inability to verbally communicate, significant motor disorders

Choice B: Technology plan for integrating AT into the curriculum for a student with severe disabilities to include visual impairment and significant motor disorders

Choice C: Technology plan for integrating AT into the curriculum for a student with severe disabilities to include hearing impairment and significant motor disorders

4. Project 2: AT for Students with High Incidence Disabilities (100 points).

This assignment results in a unit of instruction that will be designed to teach one academic skill area (e.g., social studies, science) while demonstrating how assistive technology can be used to increase student learning and motivation. The unit must also

include the opportunity for students to enhance both their reading and math skills. This assignment involves group planning and it will be developed and completed in stages. Although the project involves group planning and interaction, each student will receive individual grades for their projects.

Includes:

- Demonstration that learning characteristics of students with high incidence disabilities have been considered in the design of the unit
- Demonstration that elements of high quality design are considered when designing instruction
- Demonstration of anchored instruction to provide students and teachers with shared experiences
- Lesson plans demonstrating the integration of technology (e.g., FM amplification systems, screen readers, talking calculators, educational software)
- Presentation program designed to allow students practice of skills targeted for instruction during the unit
- Artifacts of student projects using Inspiration, Draft-Builder, Write Out Loud, and Co-Writer, Microsoft Excel)

**\*\* There will be no make up opportunities for missed quizzes. All assignments (projects) must be handed at the beginning of class or lab on the day listed on the assignment sheet. Assignments handed in late will be assessed the equivalent of one letter grade for each day late.**

### Grading

**Both SPED 4040 and 4040L are graded courses. Since the course and the lab are closely related, all tests and projects span both the course and the lab. Therefore, you will receive one grade for each course. For example, if the total points you receive equal a “B,” you will receive this grade for both SPED 4040 and SPED 4040L.**

Class Participation: 50 points

Quizzes: 100 points

Project 1: 50 points

Project 2: 100 points

Total Points:            300 points

300 - 270 = A

269 – 231 = B

230 – 201 = C

200 – 171 = D

170 and Below = F

**THE ABOVE GRADING SYSTEM IS SUBJECT TO CHANGE. I WILL NOTIFY YOU OF ALL CHANGES IF AND WHEN THEY OCCUR.**

### **Academic Honesty**

The University of Georgia seeks to promote and ensure academic honesty and personal integrity among students and other members of the University Community. A policy on academic honesty has been developed to serve these goals. All members of the academic community are responsible for knowing the policy and procedures on academic honesty. Please see the following web site for complete details.  
(<http://www.uga.edu/vpaa/polproc/ahpol/main.html>)

### **Disability Issues**

The Department of Special Education supports equal access and support for all individuals with disabilities. We also support the policies and procedures of the University of Georgia relating to students who have disabilities. Disability Services, a part of the Office of the Vice President of Student Affairs, provides academic and support services to qualified students with disabilities to ensure equal access to all programs and activities at the University of Georgia. The mission of Disability Services is to create an accessible academic, social and physical environment for students with disabilities at UGA.

### **Required Course Materials**

External storage device such as a USB Memory Key available at the OIT.

### **Additional Course Requirements**

As preservice teachers, professionalism and work ethic are an important part of your training in all of your courses. Two indicators of professionalism and work ethic are your attendance and punctuality. Therefore, you are expected to attend lectures and labs, to be on time for the beginning of class, and to be on time when class resumes after the break.

Attendance will be taken and habitual offenders will be dropped from the course. It has been my experience that there is a positive correlation between poor attendance and lower grades. There will be a tardiness policy in effect this semester both for the beginning of class and for beginning the class after the break. Those who come late to class disrupt the flow of the lecture and the concentration of the other students. Since various clocks and watches (e.g., in the classroom, mine and yours) cannot be accurately synchronized, on time will be defined as the moment when I enter the class and begin the lecture for that day or the lecture after the break.

### **Cellular Phone Policy**

Students who allow their cell phones to ring during class lectures and activities demonstrate rude and highly unprofessional behavior. Therefore, should this occur I will assess a penalty (i.e., loss of points) when I assign class participation grades for the semester. I recognize, however, that there are situations when it is very important that someone reach you (e.g, sick a family member). Should such an event be pending, please notify me at the beginning of class that you need to leave your phone turned on and that it may ring.