

EED 467, Integrating Technology Into Instruction in the Elementary Classroom

EED 467 is a required course for the ACS Education Major

College of Education

Department of Curriculum and Instruction

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Texts: Newby, T.J., Stepick, D.A., Lehman, J.D., and Russell, J.D. (2005). Instructional Technology for Teaching and Learning (Designing Instruction, Integrating Computers, and Using Media). Upper Saddle River, New Jersey: Prentice-Hall.

Carroll, J.A. and Witherspoon, T.L. (2002). Linking Technology and Curriculum. Upper Saddle River, New Jersey: Prentice-Hall.

Course Description: The purpose of EED 467 is to apply technology and computers to support instruction in various content areas in elementary and middle schools. The course will explore, evaluate, and utilize computer/technology resources to design and deliver instruction as well as to assess student learning.

- Overall Objectives for the Course:**
1. Learn to *apply* technology in the instructional process
 2. Learn the fundamental principles, generalizations, or theories involved in *applying* technology in the instructional process
 3. Gain factual knowledge (terminology, classifications, methods, trends) used in *applying* technology in the instructional process
 4. Develop specific skills, competencies, and points of view needed by professionals while *applying* technology in the instructional process

Standards Matrix:

Course Objectives	Activities	Performance Assessment	Standards: Texas Technology Applications Standards EC-8	Standards ISTE	Standards ACEI	Standards NAEYC
Demonstrate the knowledge and proper application of technology-related terms and concepts	Ability demonstrated throughout assignments	Informal assessment – determined by ability to use skills learned previously and apply appropriately	1.1k, 1.1s, 1.2s, 1.3s, 1.4s, 1.5s, 1.6s, 1.7s, 1.8s, 1.9s, 1.10s, 1.11s, 1.12s, 1.13s, 1.16s, 1.17s, 1.18s	1	2a	
Meaningful application of data input strategies	Ability demonstrated throughout assignments; Review & critique of various software; Analysis of Student Learning	Informal assessment – determined by ability to use skills learned previously and apply appropriately; Written Reports	1.1k, 1.2k, 1.1s, 1.2s, 1.3s, 1.4s, 1.6s, 1.13s, 1.16s	5	2a, 3e	
Develop a working knowledge of the ethical practices in making informed	Discuss and present conclusions; Ability demonstrated throughout assignments	Copyright and Fair Use Online Collaborative Project; Informal assessment – determined by ability to use skills learned previously and apply appropriately	1.3k, 1.14s, 1.15s, 1.16s, 1.17s, 1.18s	6	2a, 3e	IV - 5

decisions regarding current technologies and their applications						
Demonstrate process in identifying task requirements necessary to efficiently acquire, analyze, and evaluate a variety of electronic information	Hands-On Computer Lab activity; Discuss and present conclusions; Ability demonstrated throughout assignments	Written Report; Technology Mini-Lesson; Informal assessment – determined by ability to use skills learned previously and apply appropriately	2.2k, 2.3k, 2.3s, 2.8s	4	2a, 3e	III – 1,4b.4c,4d
Apply search strategies in the efficient acquisition, analysis, and evaluation of electronic information	Hands-On Computer Lab activity ; Discuss and present conclusions; Ability demonstrated throughout assignments	Copyright and Fair Use Online Collaborative Project; Analysis of Student Learning; Technology Mini-Lesson; Informal assessment – determined by ability to use skills learned previously and apply appropriately	2.1k, 2.1s, 2.2s	5,6	2a, 2i, 3e	
Demonstrate appropriate use of current technology in acquiring, analyzing, and evaluating electronic information	Hands-On activity; Discuss and present conclusions	Online Collaborative Project; Analysis of Student Learning; Technology Mini-Lesson; Informal assessment – determined by ability to use skills learned previously and apply appropriately	2.3s, 2.4s, 2.5s, 2.6s, 2.7s	5,6	2a, 2i, 3e	
Utilize task-appropriate tools to synthesize knowledge that supports the work of individuals and groups in problem-solving situations.	Student Projects for Classroom; Blackboard assignments and usage; Discuss and present conclusions; Use of various production software; Ability demonstrated throughout assignments	Presentation of Mini- Lessons in Classroom; Copyright and Fair Use Online Collaborative Projects; Informal assessment – determined by ability to use skills learned previously and apply appropriately	3.1s, 3.2s, 3.3s, 3.4s, 3.5s, 3.6s, 3.7s, 3.8s, 3.9s, 3.10s, 3.11s, 3.12s, 3.13s, 3.14s, 3.15s, 3.16s, 3.17s	2	2a, 2i	
Create and Modify solutions that support the work of individuals and groups in problem-solving situations.	Ability demonstrated throughout assignments; Student Projects for Classroom; Blackboard Assignments and usage; Discuss and present conclusions; Use of various production software; Ability demonstrated throughout assignments	Informal assessment – determined by ability to use skills learned previously and apply appropriately; Written Report; Informal assessment – determined by ability to use skills learned previously and apply appropriately	3.1k, 3.2k, 3.1s, 3.2s, 3.3s, 3.4s, 3.5s, 3.6s, 3.7s, 3.9s, 3.10s, 3.11s, 3.12s, 3.13s, 3.14s, 3.15s, 3.16s, 3.17s	2	2a, 2i	
Evaluate the results of using task-appropriate tools to support work in problem-solving situations.	Student assignments using various software; Presentation of Mini-Lesson; Discuss and present conclusions; Use of various production software; Ability demonstrated throughout assignments	Analysis of Student Learning; Informal assessment – determined by ability to use skills learned previously and apply appropriately	3.3k, 3.14s, 3.15s, 3.16s, 3.17s	2	2a, 2i	
Demonstrate communication of information in different formats and for diverse	Ability demonstrated throughout assignments; Student Projects for Classroom; Use of	Online Chats; Copyright and Fair Use Online Collaborative Projects; Technology Assistant Assignment; Need Analysis; Web Page	4.1k, 4.2k, 4.3k, 4.1s, 4.2s, 4.3s, 4.4s, 4.5s, 4.6s, 4.7s, 4.8s, 4.9s, 4.10s, 4.11s, 4.12s	5	2a, 2i, 3b, 3c, 3d, 3e, 4, 5a, 5b, 5c, 5d,	III - 2

audiences	various production software					
Plan and Organize instruction for students that incorporates the effective use of current technology for teaching and integrating the TEKS into the curriculum	Plan for delivery of instruction	Needs Analysis; Mini-Lesson Presentation	5.1k, 5.2k, 5.3k, 5.8k, 5.1s, 5.2s, 5.3s, 5.4s, 5.5s, 5.6s, 5.7s, 5.8s, 5.9s, 5.10s, 5.11s, 5.12s, 5.13s, 5.17s, 5.18s	2,3	1, 2a, 3a, 3b, 3c, 3d, 4, 5a,5b,5c,5d	III – 4b,4c,4d
Deliver and Evaluate instruction for students that incorporates the effective use of current technology for teaching and integrating the TEKS into the curriculum	Review of software; Student Demonstrations;	Presentation of Mini-Lesson; Website Reviews; Needs Analysis	5.7k, 5.3s, 5.4s, 5.10s, 5.11s, 5.12s, 5.13s, 5.14s, 5.15s, 5.16s, 5.18s	3,4	1,2a,2i,3a,3b,3c,3d, 3e,4,5a,5b,5c,5d	III – 4b,4c,4d
			Texas Pedagogy and Professional Responsibilities Standards			
Design instruction for all students that reflects relevant content and appropriate assessment	Student Projects for Classroom	Needs Analysis	1.19k, 1.20k, 1.21k, 1.22k, 1.23k, 1.24,	2	1,2a,3a,3b,3c,3d,3e ,4,5a,5b,5c,5d	I.-1, 4b, 4c,4d
Create classroom environment of respect and rapport , fostering positive climate	Designing Mini-Lesson; Technology Assistant Assignment	Presentation of Mini-Lesson; Needs Analysis; Web Page	2.10k	2	1	II – 4b,4c,4d
Create instruction that makes use of effective communication techniques, engaging instructional strategies, and efficient feedback	Designing Mini-Lesson; Student Projects for Classroom; Technology Assistant Assignment	Presentation of Mini-Lesson; Needs Analysis	3.7k	2,3,4	1,2a,2i,3a,3b,3c,3d, 3e,4,5a,5b,5c,5d	III – 4b,4c,4d

NAEYC Standards

1. Promoting Child Development and Learning
2. Building Family and Community Relationships
3. Observing, Documenting, and Assessing to Support Young Children and Families
4. Teaching and Learning
 - 4a. Connecting with children and families
 - 4b. Using developmentally effective approaches
 - 4c. Understanding content knowledge in early education
 - 4d. Building meaningful curriculum
5. Becoming a Professional

TECHNOLOGY APPLICATIONS STANDARDS (SBEC)
FOR ALL BEGINNING TEACHERS

Standard I. All teachers use technology-related terms, concepts, data input strategies, and ethical practices to make informed decisions about current technologies and their applications.

Standard II. All teachers identify task requirements, apply search strategies, and use current technology to efficiently acquire, analyze, and evaluate a variety of electronic information.

Standard III. All teachers use task-appropriate tools to synthesize knowledge, create and modify solutions, and evaluate results in a way that supports the work of individuals and groups in problem-solving situations.

Standard IV. All teachers communicate information in different formats and for diverse audiences.

Standard V. All teachers know how to plan, organize, deliver, and evaluate instruction for all students that incorporates the effective use of current technology for teaching and integrating the Technology Applications Texas Essential Knowledge and Skills (TEKS) into the curriculum.

ACEI Standards

Standard 1 Development and learning—Candidates know, understand, and use the major concepts, principles, theories, and research related to development of children and young adolescents to construct learning opportunities that support individual students' development and acquisition of knowledge.

Standard 2.2 Science—Candidates know, understand, and use fundamental concepts in the subject matter of science—including physical, life, and earth and space sciences—as well as concepts in science and technology, science in personal and social perspectives, the history and nature of science, the unifying concepts of science, and the inquiry processes scientists use in discovery of new knowledge to build a base for scientific and technological literacy.

Standard 3.1 Integrating and applying knowledge for instruction—Candidates plan and implement instruction based on knowledge of students, learning theory, connection across the curriculum, curricular goals, and community.

Standard 3.2 Standard Adaptation to diverse students—Candidates understand how elementary students differ in their development and approaches to learning, and create instructional opportunities that are adapted to diverse students.

Standard 3.3 Development of critical thinking and problem solving.—Candidates understand and use a variety of teaching strategies that encourage elementary students' development and use of critical thinking and problem solving,

Standard 3.4 Active engagement in learning—Candidates use their knowledge and understanding of individual and group motivation and behavior among students at the K-6 level to foster active engagement in learning, self- motivation, and positive social interaction and to create supportive learning environments.

Standard 3.5 Communication to foster learning—Candidates use their knowledge and understanding of effective verbal, nonverbal, and media communication techniques to foster activity inquiry, collaboration, and supportive interaction in the elementary classroom.

Standard 4. Assessment for instruction—Candidates know, understand, and use formal and informal assessment strategies to plan, evaluate, and strengthen instruction that will promote continuous intellectual, social, emotional, and physical development of each elementary student.

Standard 5.1 Professional growth, reflection and evaluation—Candidates are aware of and reflect on their practice in light of research on teaching, professional ethics, and resources available for professional learning; they continually evaluate the

effects of their professional decisions and actions on students, families, and other professionals in the learning community and actively seek out opportunities to grow professionally.

Standard 5.2 Collaboration —Candidates know the importance of establishing and maintaining positive collaborative relationships with families, school colleagues, and agencies in the larger community to promote the intellectual, social, emotional, physical growth, and well-being of children.

International Society for Technology in Education (ISTE)

(National Education Technology Standards)

I. **TECHNOLOGY OPERATIONS AND CONCEPTS.**

Teachers demonstrate a sound understanding of technology operations and concepts. Teachers:

- A. demonstrate introductory knowledge, skills, and understanding of concepts related to technology (as described in the ISTE National Education [Technology Standards for Students](#))
 - B. demonstrate continual growth in technology knowledge and skills to stay abreast of current and emerging technologies.

II. **PLANNING AND DESIGNING LEARNING ENVIRONMENTS AND EXPERIENCES.**

Teachers plan and design effective learning environments and experiences supported by technology. Teachers:

- . design developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of learners.
 - A. apply current research on teaching and learning with technology when planning learning environments and experiences.
 - B. identify and locate technology resources and evaluate them for accuracy and suitability.
 - C. plan for the management of technology resources within the context of learning activities.
 - D. plan strategies to manage student learning in a technology-enhanced environment.

III. **TEACHING, LEARNING, AND THE CURRICULUM.**

Teachers implement curriculum plans, that include methods and strategies for applying technology to maximize student learning. Teachers:

- . facilitate technology-enhanced experiences that address content standards and student technology standards.
 - A. use technology to support learner-centered strategies that address the diverse needs of students.
 - B. apply technology to develop students' higher order skills and creativity.
 - C. manage student learning activities in a technology-enhanced environment.

IV. **ASSESSMENT AND EVALUATION.**

Teachers apply technology to facilitate a variety of effective assessment and evaluation strategies. Teachers:

- . apply technology in assessing student learning of subject matter using a variety of assessment techniques.
 - A. use technology resources to collect and analyze data, interpret results, and communicate findings to improve instructional practice and maximize student learning.
 - B. apply multiple methods of evaluation to determine students' appropriate use of technology resources for learning, communication, and productivity.

V. **PRODUCTIVITY AND PROFESSIONAL PRACTICE.**

Teachers use technology to enhance their productivity and professional practice. Teachers:

- . use technology resources to engage in ongoing professional development and lifelong learning.
 - A. continually evaluate and reflect on professional practice to make informed decisions regarding the use of technology in support of student learning.
 - B. apply technology to increase productivity.
 - C. use technology to communicate and collaborate with peers, parents, and the larger community in order to nurture student learning.

VI. **SOCIAL, ETHICAL, LEGAL, AND HUMAN ISSUES.**

Teachers understand the social, ethical, legal, and human issues surrounding the use of technology in PK-12 schools and apply those principles in practice. Teachers:

- . model and teach legal and ethical practice related to technology use.
- A. apply technology resources to enable and empower learners with diverse backgrounds, characteristics, and abilities.
- B. identify and use technology resources that affirm diversity
- C. promote safe and healthy use of technology resources.
- D. facilitate equitable access to technology resources for all students.

Pedagogy and Professional Responsibilities:

The Sam Houston State University Elementary Education Program is committed to helping the pre-service elementary teachers achieve the following Pedagogy and Professional Responsibilities proficiencies, which, collectively, describe a vision of an ideal elementary school teacher in Texas.

Standard I. * The teacher designs instruction appropriate for all students that reflects an understanding of relevant content and is based on continuous and appropriate assessment.

Standard II. * The teacher creates a classroom environment of respect and rapport that fosters a positive climate for learning, equity, and excellence.

Standard III. * The teacher promotes student learning by providing responsive instruction that makes use of effective communication techniques, instructional strategies that actively engage students in the learning process, and timely, high-quality feedback.

Standard IV. The teacher fulfills professional roles and responsibilities and adheres to legal and ethical requirements of the profession.

Course Format:

The format of the class includes lecture, small group discussions, whole class discussion, on-line discussions/assignments, and field experience. Grades consist of professor and classroom mentor teacher assessment of organizational spreadsheets, written reports, journals, class participation, on-line discussions, needs analysis, webpage preparation/maintenance, appropriate implementation of technology into instruction, newsletter, contribution of technology skills in a community setting, designing appropriate assessment tool, evaluation of computational spreadsheets, and written test.

Course Content:

Introduction/Application of Technology in Classroom

Use of technology in instruction and learning

Theory of learning and the role of technology

Use of computer and technology in teaching and learning

Review and critique of educational websites

Development of instructional plan

Identify methods and media for learning

Select appropriate methods, media, and materials for more meaningful learning

Use of various forms of technology in instruction

Using the Internet and distance education

Analysis of student work and materials used during instruction

Current and future issues in instructional technology

Presentation of instructional lesson in a classroom setting

Course Requirements:

1. Student projects include organizational spreadsheet, needs analysis, assessment tool, webpage, and website review to determine various learning theories incorporated into the websites and application of websites
2. Act as a Technology Assistant in a public school/community setting, assisting the teachers and staff in the area of technology
3. Preparation of technology Mini-Lesson Presentation
4. Analysis of Student Learning
5. Copyright and Fair Use Project
6. On-line chats addressing processes in the instructional cycle

Evaluation

	<u>Points</u>
Organizational spreadsheet	25
Homepage in Blackboard	10
Website Review for Learning Theories and Classroom Implementation	40
Needs analysis	70
Technology Mini-Lesson Presentation	70
Formative assessment tool	25
Technology Assistant Reflection & Log Sheet	50
Analysis of Student Learning/Reflection & Self-Evaluation	85
Copyright and Fair Use Collaborative Project	50
On-line chats addressing topics related to the instructional process	<u>25</u>
Total Points from EED 467	450
+Points from Methods Block	<u>150</u>
GRAND TOTAL OF POINTS	<u>600</u>

Grading Scale

- A = 552-600 points
- B = 492-551.9 points
- C = 432-491.9 points
- D = 372-431.9 points
- F = 371.9 points or lower

*A grade in any methods course of "D" or lower will result in the candidate repeating the course before they are eligible for student teaching.

Time Requirement

For each hour in class, you will be expected to commit at least three hours outside of class. It is expected that if you enroll in this course, you can meet the time requirements.

Evaluation by Group

At the end of the semester, each student will be asked to complete an evaluation form regarding each group member he/she worked with throughout the semester. Although not included in the total points for the course, consistent negative comments about the willingness of a student to work well with peers will be documented as a Dispositions matter in the candidate's file.

Attendance

Regular and punctual attendance is required and will be documented every class period.

As per University policy, candidates will not be penalized for three (3) hours of absence during the semester. This class period absence should be used carefully for emergencies and illnesses. It is important that candidates notify the professor via email or phone call prior to, or on the day of, the absence regardless of the reason for the absence.

Upon the second absence, after the three (3) hours of absence allowed by the University, the Department of Curriculum and Instruction will be notified and a notation will be made in the candidate's file. After the third absence, the candidate will attend a conference with the course professor as well as the Chairperson of Curriculum and Instruction to discuss and evaluate reasons for the absences, and to determine if the candidate needs to continue in the program. Excessive absences can constitute reasons for lowering of semester grades, and possibly, removal from the course or block of courses. Each absence beyond the first absence may result in a five-point reduction of your final grade in EED 467 for each class missed. Excessive absences can constitute reasons for lowering of semester grades, and possibly, removal from the methods semester.

It is the student's responsibility to obtain prior approval from the instructor for making up class assignments. Documentation from the student may be required for approval. It is also the student's responsibility to retrieve handouts and materials from the missed class from classmates. Any missed group work may not be made up.

Tardies

If a student is fifteen minutes or more late to class or leaves class fifteen minutes or more before class is over, an absence will be recorded. A student who shows a pattern of being a few minutes late (but less than 15) will be notified that continuation of that pattern will result in an absence.

Late Work

Scheduled assignments are due by midnight electronically on the due date. If assignments are one day late, there will be a reduction in possible points earned on that assignment of 50%. Second day late, the assignment receives a zero.

Recognizing that "extenuating circumstances" may occur, documentation of reason for late work may be submitted to instructor for consideration of reinstating original possible points.

Professionalism

Professionalism is expected, both in the classroom and in the public schools. If individual assignments possess a striking similarity to another student's work, penalty may be, minimally, the drop of one letter grade. During field experience, proper dress is expected. The teacher candidates should practice appropriate dress and behavior simultaneously as they practice the application of instructional strategies they are learning in the classroom.

Dispositions

In addition to the requirements for this course, in order to be eligible to register for the next level/course in your program, you must demonstrate the dispositions listed for the "Emerging Competence" level. These "Emerging Competence" levels consist of the following categories: Values, Commitment, Professional Ethics, and Organization/Flexibility. Dispositions Notebook details will be given later.

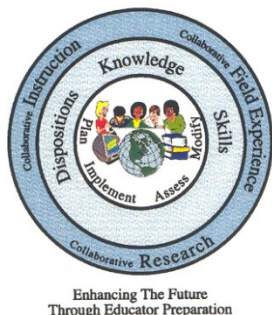
Additional Information

Please visit the following website for additional Sam Houston State University syllabus information:

<http://www.shsu.edu/syllabus/>

Bibliography:

1. How People Learn: Brain, Mind, Experience, and School: Expanded Edition -- by John Bransford (Editor)
2. Computers in the Classroom: Mindtools for Critical Thinking – D. H. Jonassen
3. Educational Psychology: A Cognitive View – D. P. Ausubel, J.D. Novak, H. Hanesian



Through programs dedicated to **collaboration in instruction, field experience, and research**, the candidates in **Sam Houston State University's Educator Preparation Programs** acquire the **knowledge, dispositions, and skills** necessary to create a positive learning environment. Employing a variety of **technologies**, these candidates learn to **plan, implement, assess, and modify instruction** to meet the needs of our communities' **diverse learners**.