

# EDT 3371: Educational Technology

## Spring 2019 Syllabus

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### Course Information

Class meeting time: Thursdays, 2:30 PM - 5:20 PM  
Classroom: Education Building, Room 201  
Course Type: Hybrid (50-85% online instructional method)  
Section: 009 / CRN: 22124

### Course Instructor

Daniel Tillman, Ph.D.  
Assistant Professor of Educational Technology

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Office hours: Wednesdays, 11:00 AM – 1:10 PM, and by appointment

Email is the best way to contact me. Please send all your queries regarding the course to my UTEP Email ([datillman@utep.edu](mailto:datillman@utep.edu)). Use of Blackboard mailing system to reach me is not recommended. I answer emails within 48 hours. Please write “EDT 3371” in your subject line.

### Course Description

Basic principles of educational technology for prospective teachers, including terminology, historical development, social and ethical implications, proficiency in the application of technology tools, and integration of technology in school curricula. This course is designed to prepare pre-service teachers to meet national and state standards for using technology to improve productivity and integrating technology into teaching as an instructional tool.

### Course Objectives (TEXES Competencies Addressed during Course)

The TEXES Competencies that will be covered during this class includes:

#### DOMAIN I—TECHNOLOGY APPLICATIONS CORE

Competency 001. The teacher knows technology terminology and concepts; the appropriate use of hardware, software, and digital files; and how to acquire, analyze, and evaluate digital information.

Competency 002. The teacher knows how to use technology tools to solve problems, evaluate results, and communicate information in a variety of formats for diverse audiences.

Competency 003. The teacher knows how to plan, organize, deliver, and evaluate instruction that effectively utilizes current technology for teaching the Technology Applications Texas Essential

Knowledge and Skills (TEKS) for all students.

#### DOMAIN II—DIGITAL GRAPHICS/ANIMATION AND DESKTOP PUBLISHING

Competency 004. The teacher demonstrates knowledge of the principles of design and their application to digital graphics/animation products.

Competency 005. The teacher demonstrates knowledge of principles of typography and page design and knows how to use technology tools to create desktop publishing products.

Competency 006. The teacher knows how to use graphics, animation, and desktop publishing software to produce products that convey a specified message to an intended audience.

#### DOMAIN III—VIDEO TECHNOLOGY AND MULTIMEDIA

Competency 007. The teacher knows how to produce and distribute digital video and multimedia products.

Competency 008. The teacher demonstrates knowledge of strategies and techniques used in the preproduction, production, and postproduction of video products.

Competency 009. The teacher knows how to design, produce, and distribute multimedia products.

#### DOMAIN IV—WEBMASTERING

Competency 010. The teacher demonstrates knowledge of strategies and techniques for Web site administration.

Competency 011. The teacher knows principles of Web page design and uses a variety of tools and techniques to design and troubleshoot Web pages for a diverse audience.

Competency 012. The teacher knows how to use Web pages to communicate and interact effectively with others.

Additionally, by the end of the class, students should be able to:

- 1) Develop skills in using word processing, spreadsheet, presentation and publishing tools to improve productivity and instruction (NSTE-T<sup>1</sup> 3a, 3c, MTTS<sup>2</sup> 1, 4)
- 2) Develop knowledge and skills in using Web 2.0 tools for instruction (NSTE-T 1d, 3a, 3d, MTTS 3)
- 3) Understand how to design technology-rich lessons (NSTE-T 2a, 2b, MTTS 2)
- 4) Understand how to use technology tools for continuing professional development. (NSTE-T 5a, 5c, MTTS 2)

<sup>1</sup> National Educational Technology Standards for Teachers, Second Edition, 2008 ISTE (International society for Technology in Education), [www.iste.org](http://www.iste.org).

<sup>2</sup> The Texas State Board of Educator Certification standards for a “Master Technology Teacher.” <http://www.sbec.state.tx.us/sbeconline/mtp/mtt/standards.pdf>

## **Late Assignments**

Late assignments are accepted, but 10% will be deducted for each week of late submission.

## **Bonus Points**

Sometimes volunteers will be given the option to help fellow students who are having difficulty with class exercises. When this occurs, the volunteers will receive bonus points at the discretion of the instructor.

## **Class Attendance**

Attendance and participation in class sessions are required. If a student has to miss a class due to an emergency, a notice to the instructor is required as soon as possible. The instructor may request proper documentation, such as doctor's notes, as justification. If you are absent from class three or more times, you may be dropped from the course (see UTEP student handbook for details).

## **Time Commitment**

The standard workload for a university course requires a minimum of two hours of study time for every class hour. All course work, both in and outside class, should be of high quality and reflect your development as an aspiring technology-savvy teacher.

## **Course Requirements**

Students are expected to adhere to a social contract of common decency. Stealing or academic cheating will not be tolerated.

## **Course Schedule Changes**

The course instructor reserves the right to adjust the course syllabus or change assignments as needed. I will give you ample notice prior to any changes.

## **Equipment for Course**

This classroom includes materials and equipment for facilitating hands-on activities, some of which are flammable (i.e., Bunsen burners, 3D-printers, 2D-fabricators); therefore, *per* The University of Texas Regulations, any type of gunpowder-based weapons or ammunition is strictly forbidden in the Educational Technology Research Laboratory (room #201 of the Education Building at UTEP), and violation of this policy will result in the violator being dropped from the class and escorted off the premises by UTEP Security.

## **Course Readings**

There is no required textbook for this course. All course materials will be posted on Dropbox for you to download. You should read required readings and prepare for discussion in class. Links to multimedia materials will also be provided.

### **Disabled Student Statement**

Section 504 of the Vocational Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990, states that if a student needs an accommodation then the Center for Accommodations and Support Services (CASS) located at UTEP needs to be contacted. If you have a condition, which may affect your ability to perform successfully in this course, you are encouraged to discuss this in confidence with the instructor and/or the director of the Center for Accommodations and Support Services (CASS). You may call 915-747-5148 for general information about the American with Disabilities Act (ADA) and the rights that you have as a UTEP student with a disability. Individuals with disabilities have the right to equal access and opportunity. It is the student's responsibility to contact the instructor and the Center for Accommodations and Support Services (CASS) at The University of Texas at El Paso.

### **Equal Educational Opportunity**

In order to create equal educational opportunities in the class, all students are expected to demonstrate respect for the diverse voices and individual differences in the class. Particularly, no person shall be excluded from participation in, denied benefits of, or be subject to discrimination under any program or activity sponsored or conducted by the University of Texas at El Paso on the basis of race, color, national origin, religion, sex, age, veteran status, disability, or sexual orientation. Any member of the University community who engages in discrimination or other conduct in violation of University policy is subject to the full range of disciplinary action, up to and including separation from the University. Complaints regarding discrimination should be reported to the University's Equal Opportunity Office. Inquiries regarding applicable policies should be addressed to the University's Equal Opportunity Office, Kelly Hall, 3rd Floor, 915.747.5662 or [eoaa@utep.edu](mailto:eoaa@utep.edu).

### **Academic Dishonesty Statement**

Academic dishonesty is prohibited and is considered a violation of the UTEP Handbook of Operating Procedures. It includes, but is not limited to, cheating, plagiarism, and collusion. Plagiarism occurs when someone intentionally or knowingly represents the words or ideas of another person's as ones' own. More information can be found at: <http://admin.utep.edu/Default.aspx?PageContentID=2084&tabid=30292>

### **Technical Assistance**

If you have technical problems, please contact the UTEP Helpdesk: M-F: 7AM-8PM, Sat: 9AM-1PM, Sun: 12-4PM. On-campus phones: 915-747-5257 Off-campus phones: 915-

747-4357. If you are on-campus, you may also visit the ATLAS lab located within the Undergraduate Learning Center or the Technology Support Center in Room 300, Library.

## **Assignments**

### Daily hand-in (15 points)

Each required live class session begins with turning in your daily hand-in. The daily hand-in is collected at the beginning of class; a daily hand-in received after the beginning of class will receive half credit. Daily hand-ins will not be accepted via email or after the end of the class period unless approval has been obtained from the instructor. The daily hand-in should include your name and the date, and then a single sentence or a single question related to the topic of educational technology.

### Assignments (50 points)

Each class, students will be given an assignment to practice the skills or reflect on the ideas taught. Instructions on assignments will be provided in class and posted online afterwards. It is important that students complete assignments in a timely manner. Missing assignments will decrease your chance to get a desirable grade in this class.

Unless instructed otherwise, each assignment is due prior to the beginning of the class period scheduled time. Assignments should use the following name format:

*YourFirstName\_YourLastName.filetype (Example: Daniel\_Tillman.jpg)*

### Final project (20 points)

The final project will be a culmination of the work you did in the assignments. So long as you complete all of the assignments then you should not have any difficulties with the final project. The final project will include four components, all of which will be submitted via your Dropbox account, and the specific criteria for which will be articulated through the assignment descriptions.

### Final exam (15 points)

At the end of the course, a final exam will be conducted to test students on the content that was taught in the first and second halves of the semester. The final exam will be primarily open-ended short essay questions.

## **Grading**

Total possible: 100 points

A: 90-100 points / B: 80-89 points / C: 70-79 points / D: 60-69 points / F: 0-59 points

### Course Schedule (subject to change)

Week	Class	Assignment Due	Discussion Topic
1	1/24/2019 [LIVE]	None.	Overview of syllabus, defining educational technology.
2	1/31/2019 [LIVE]	Assignment 1 due.	Educational technology in schools.
3	2/7/2019 [VIRTUAL]	Assignment 2 due.	Educational technology in the classroom.
4	2/14/2019 [VIRTUAL]	Assignment 3 due.	Educational technology and teachers.
5	2/21/2019 [LIVE]	Assignment 4 due.	Educational technology and students
6	2/28/2019 [VIRTUAL]	Assignment 5 due.	Educational technology historically.
7	3/7/2019 [VIRTUAL]	Assignment 6 due.	Contemporary educational technology.
8	3/14/2019 [LIVE]	Assignment 7 due.	Educational technology in informal settings.
9	3/21/2019	<i>Spring Break</i>	<i>No Class</i>
10	3/28/2019 [VIRTUAL]	Assignment 8 due.	Innovative educational technology.
11	4/4/2019 [VIRTUAL]	Assignment 9 due.	Adaptation to educational technology.
12	4/11/2019 [LIVE]	Assignment 10 due.	Resistance to educational technology.
13	4/18/2019 [VIRTUAL]	Assignment 11 due.	Educational technology action research.
14	4/25/2019 [VIRTUAL]	Assignment 12 due.	Educational technology in higher education.
15	5/2/2019 [LIVE]	Final Project due.	Educational technology topics synthesis.
16	5/13/2019 [VIRTUAL]	Final Exam due.	Educational technology in the future.

## Rubric for Assignments

<b>Level</b>	<b><i>Standard to be Achieved for Performance at a Specified Level</i></b>
<b>A</b>	Fully achieves the goals and objectives of the assignment, has made accurate observations, drawn insightful conclusions or extensions, and shows clear understanding of concepts. Communicates effectively. Completed on time.
<b>B</b>	Addresses all aspects of assignment, but goals and objectives may not be fully met. Student displays understanding of main concepts, although some less important ideas may not be in place. Results may be incomplete or not clearly presented.
<b>C</b>	Important goals or objectives of the assignment are not met. Work may need redirection. Gaps in conceptual understanding are present. Student's approach to assignment may lead away from assignment completion. Attempts communication.
<b>D</b>	Goals and objectives of the assignment are not met. Shows little or no evidence of appropriate reasoning. Presents fragmented understanding of concepts. Presents erroneous or extraneous conclusions.
<b>F</b>	Does not attempt assignment.

## Student Learning Outcomes and Assessment

The course's learning outcomes will require the student to acquire throughout the semester new knowledge and skills pertaining to educational technology, and then build upon them. The following table provides a list of outcomes for the course.

Student learning outcomes	Assessment
<i>By the end of course, the student will be able to:</i>	<i>To evaluate these outcomes, the faculty member will use the following assessment procedures:</i>
Understand the history of educational technology, important models and frameworks in technology integration, and national and state standards of educational technology.	Class discussion, assignments, and final project.
Improve skills in using word processing program to enhance productivity.	Class exercises, assignments, and final exam.
Improve skills in using presentation program to enhance productivity.	Class exercises, assignments, and final exam.
Know how to produce newsletters, brochures, and flyers using desktop publishing program.	Class exercises, assignments, and final exam.
Improve skills in using spreadsheet to manage and analyze data related to teaching.	Class exercises, assignments, and final exam.
Understand important Web 2.0 concepts and tools.	Class exercises, discussions, assignments, and final project.
Know how to use blogs and understand its educational applications.	Class exercises, discussions, assignments, and final project.
Know how to use content aggregation tools to stay updated with topics of interest.	Class exercises, discussions, assignments, and final project.
Know how to use online collaborative tools to create and share documents with peers.	Class exercises, discussions, assignments, and final project.
Know how to create digital story telling using photo-sharing tools.	Class exercises, discussions, and weekly assignments.
Know how to create a comprehensive class website to enhance instructional productivity.	Class exercises, discussions, and weekly assignments.
Know how to organize Internet resources using social bookmarking tools.	Class exercises, discussions, and weekly assignments.
Improve skills in designing lessons to integration technology.	Final project.



## APPENDIX A: TEA Test Frameworks Addressed during Course

In addition to the TExES Competencies addressed during this course (described in the Course Objectives), the TEA Test Framework for Generalist EC-6 will also be addressed during this class, including the following Competency areas and topics:

### **Competency 009 (Reading, Inquiry, and Research)**

The teacher understands the importance of research and inquiry skills to students' academic success and provides students with instruction that promotes their acquisition and effective use of those study skills in the content areas.

The beginning teacher:

- A. Teaches students to develop open-ended research questions and a plan (e.g. timeline) to locate, retrieve, and record information from a range of content-area, narrative, and expository texts
- B. Selects and uses instructional strategies to help students comprehend abstract content and ideas in written materials (e.g., manipulatives, examples, graphic organizers)
- C. Selects and uses instructional strategies to teach students to interpret information presented in various formats (e.g., maps, tables, graphs) and how to locate, retrieve, and record information from technologies, print resources, and experts
- D. Selects and uses instructional strategies to help students understand study and inquiry skills across the curriculum (e.g., brainstorming; generating questions and topics; using text organizers; taking notes; outlining; drawing conclusions; applying critical-thinking skills; previewing; setting purposes for reading; locating, organizing, evaluating, and communicating information; summarizing information; selecting relevant sources of information; using multiple sources of information; recognizing identifying features of sources, including primary and secondary sources; interpreting and using graphic sources of information) and knows the significance of organizing information from multiple sources for student learning and achievement
- G. Understands how to foster collaboration with peers, families, and with other professionals to promote all students' ability to develop effective research and comprehension skills in the content areas

### **Competency 012 (Viewing and Representing)**

The teacher understands skills for interpreting, analyzing, evaluating, and producing visual images and messages in various media, including electronic, and provides students with opportunities to develop skills in this area.

The beginning teacher:

- A. Knows grade-level expectations for viewing and representing visual images and messages as described in the Texas Essential Knowledge and Skills (TEKS)
- B. Understands and teaches the characteristics and functions of different types of media (e.g., film, print) and knows how different types of media influence and inform
- C. Teaches students to compare and contrast print, visual, and electronic media, including levels of formality and informality (e.g. email, Web-based news article, blogs)
- D. Teaches students to evaluate how visual image makers (e.g., illustrators, documentary filmmakers, political cartoonists, news photographers) represent messages and meanings, and provides students with opportunities to interpret and evaluate visual images in various media
- E. Knows how to teach students to analyze visual image makers' choices (e.g., style, elements, media) and evaluate how those choices help represent or extend meaning
- F. Provides students with opportunities to interpret events and ideas based on information from maps, charts, graphics, video segments, and technology presentations and to use media to compare ideas and points of view
- G. Knows steps and procedures for teaching students to produce visual images and messages with various meanings to communicate with others
- H. Teaches students how to select, organize, and produce visuals to complement and extend meanings
- I. Provides students with opportunities to use technology for producing various types of communications (e.g., class newspapers, multimedia reports, video reports) and helps students analyze how language, medium, and presentation contribute to the message

J. Understands how to foster collaboration with families and with other professionals to promote students' development of media literacy

### **Competency 014 (Mathematics Instruction)**

The teacher understands how students learn mathematical skills and uses that knowledge to plan, organize, and implement instruction and assess learning.

The beginning teacher:

- A. Plans appropriate instructional activities for all students by applying research-based theories and principles of learning mathematics
- B. Employs instructional strategies that build on the linguistic, cultural, and socioeconomic diversity of students and that relate to students' lives and communities
- C. Plans and provides developmentally appropriate instruction that establishes transitions between concrete, symbolic, and abstract representations of mathematical knowledge and that builds on students' strengths and addresses their needs
- D. Understands how manipulatives and technological tools can be used appropriately to assist students in developing, comprehending, and applying mathematical concepts
- E. Creates a learning environment that motivates all students and actively engages them in the learning process by using a variety of interesting, challenging, and worthwhile mathematical tasks in individual, small-group, and large-group settings
- F. Uses a variety of tools (e.g., counters, standard and nonstandard units of measure, rulers, protractors, scales, stopwatches, measuring containers, money, calculators, software) to strengthen students' mathematical understanding
- G. Implements a variety of instructional methods and tasks that promote students' ability to do the mathematics described in the Texas Essential Knowledge and Skills (TEKS)
- H. Develops clear learning goals to plan, deliver, assess, and reevaluate instruction based on the mathematics in the Texas Essential Knowledge and Skills (TEKS)
- I. Helps students make connections between mathematics and the real world, as well as between mathematics and other disciplines such as art, music, science, social science, and business
- J. Uses a variety of questioning strategies to encourage mathematical discourse and to help students analyze and evaluate their mathematical thinking
- K. Uses a variety of formal and informal assessments and scoring procedures to evaluate mathematical understanding, common misconceptions, and error patterns
- L. Understands the relationship between assessment and instruction and knows how to evaluate assessment results to design, monitor, and modify instruction to improve mathematical learning for all students, including English-language learners
- M. Understands the purpose, characteristics, and uses of various assessments in mathematics, including formative and summative assessments
- N. Understands how mathematics is used in a variety of careers and professions and plans instruction that demonstrates how mathematics is used in the workplace

### **Competency 025 (Lab Processes, Equipment, and Safety)**

The teacher understands how to manage learning activities, tools, materials, equipment, and technologies to ensure the safety of all students.

The beginning teacher:

- A. Understands safety regulations and guidelines for science facilities and science instruction
- B. Knows procedures for and sources of information regarding the appropriate handling, use, disposal, care, and maintenance of chemicals, materials, specimens, and equipment
- C. Knows procedures for the safe handling and ethical care and treatment of organisms and specimens
- D. Selects and safely uses appropriate tools, technologies, materials, and equipment needed for instructional activities
- E. Understands concepts of precision, accuracy, and error with regard to reading and recording numerical data from a scientific instrument
- F. Understands how to gather, organize, display, and communicate data in a variety of ways (e.g., charts, tables, graphs, diagrams, written reports, oral presentations)