



“The mediocre teacher tells. The good teacher explains. The superior teacher demonstrates. The great teacher inspires.” -- William Arthur Ward, writer

SCED 4367(21722)/4368 (26457)
Teaching Mathematics and Science in Secondary School
Spring 2019 **Thursdays, 3:00 to 5:50 PM, EDUC405**

This syllabus is subject to change as needed. Any changes to the syllabus will be announced in class and/or posted on Blackboard.

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Course Philosophy and Description:

For teachers of mathematics and science to be truly effective involves bringing together four basic components:

- A. An appreciation of the discipline of mathematics and/or science itself;
- B. An understanding of how students learn and construct ideas;
- C. An ability to design and select challenging tasks, create problem-solving environment
- D. The ability to integrate appropriate, mathematically and/or scientifically meaningful assessment within the teaching process.

One of the main components of teaching is helping students to “discover” mathematics or science for themselves by creating successful inquiry-based learning environments, a friendly atmosphere, and an “open mind” approach. The goal of teaching is not only for students to find the correct answer, but to find answers using the "best" method. Hence, a teacher needs to promote students' thinking, to encourage searching for different methods leading to the same answer. Discovery learning is enhanced with error analysis and trial and error. The role of teacher is to select the true variety, to engage students by posing challenging problems and encourage



students to invent new ways of approaching the problem without fear of making a mistake.

This course has been constructed to help you in critically examining the philosophies, theories, research, pedagogical techniques, and materials associated with effective learning and teaching in secondary classrooms.

Course Goals and Objectives:

We will address factors that support meaningful growth and progress on an inner journey towards personal transformation. Our classroom community will develop a process that will allow us to explore “who we are, what assumptions we hold as true, how and what we teach, how we organize ourselves, and what barriers prevent us from creating authentic learning environments” (Crowell, Caine & Caine, 1998).

Students enrolled in this course will explore the methods of teaching in secondary classrooms. Emphasis is placed on the equity principle (learning for all) and development of conceptual understanding of topics. Specifically, students will become more effective in the following areas by:

- Exploring innovative learning theories and techniques of teaching and learning including problem-based and inquiry, open-ended approach.
- Studying how to apply general and content methods of teaching and learning in diverse classroom settings.
- Helping the students to create successful learning environment in teaching and learning
- Writing and analyzing lesson plans that support the learning cycle.
- Unpacking state standards for specific content areas and developing practical and engaging use of TEKS.
- Demonstrating use of educational technology within lesson plan development and mini-teaching experiences.
- Demonstrating understanding of critical reading of texts and web sites through writing and discussion.



- Demonstrating reflection about teaching and learning through writing and discussion.
- Writing and discussion to demonstrate an informed perspective about curriculum and related educational issues.
- Addressing the domain and competencies that will prepare you for state certification content exam [TeXes].

Course Structure:

Classes for this course will be done using face-to-face, lab (may be face-to-face and/or online) and web-enhanced formats. The class will be a combination of lecture, guided instruction, classroom and online discussion, classroom and online exercises and project development. It is expected that students will attend all class sessions.

SCED 4367 Required Texts:

Maletsky, E.M. & Sobel, M.A. (1999). *Teaching Mathematics: A Sourcebook of Aids, Activities, & Strategies*. Paperback ISBN 0-205-29256-9 The following is the link to this book on Amazon.com:

<http://www.amazon.com/Teaching-Mathematics-Sourcebook-Activities-Strategies/dp/0205292569>

Small, M. & Lin, A. (2010). *More Great Ways to Differentiate Secondary Mathematics Instruction*. Paperback ISBN 978-0-8077-5088-9. The following is the link to this book on Amazon.com:

http://www.amazon.com/s/ref=nb_sb_noss?url=search-alias%3Daps&field-keywords=More+Great+Ways+to+Differentiate+Secondary+Mathematics+Instruction

SCED 4368 Required Texts:

Robertson, W. (2014). *Action Science: Relevant Teaching and Active Learning*. Paperback ISBN 9781452256566

Optional Texts:

National Research Council. (2005). *How Students Learn Mathematics in the Classroom*. Paperback 5th Ed. ISBN13: 978-0309089494 ISBN10: 0309089492 The following is the link to this book on Amazon.com:http://www.amazon.com/dp/0309089492/?tag=mh0b-20&hvadid=7006650452&hvqmt=e&hvbmt=be&hvdev=c&ref=pd_sl_7mv6j40j4h_e



National Research Council. (2005). *How Students Learn Science in the Classroom*. Paperback. ISBN: 0-309-07433-9 (hardcover) ISBN-13: 978-0309089494 ISBN-10: 0309089492 The following is the link to this book on Amazon.com: https://www.amazon.com/How-Students-Learn-Mathematics-Classroom/dp/0309089492/ref=sr_1_1?ie=UTF8&qid=1485109263&sr=8-1&keywords=National+Research+Council.+%282005%29.+How+Students+Learn+Science+in+the+Classroom.

Jackson, R. R. (2009). *Never work harder than your students and other principles of great teaching*. Alexandria, VA: ASCD. ISBN- 978-1-4166-0757

Brooks, J.G., & Brooks, M.G. (1999). *In Search of Understanding: The Case for Constructivists Classrooms*. Alexandria, VA: ASCD.

Canestari and Marlow (2013). *Educational Foundations: An Anthology of Critical Readings (Third Edition)*. Sage Publications ISBN-13:978-1452216768

Ornstein, A.C., Pajak, E. F., & Ornstein, S.B. (2007). *Contemporary Issues in Curriculum (Fourth Edition)*. Pearson ISBN 0-205-48925-7

Cuban, L. (2013). *Inside The Black Box of Classroom Practice: Change Without Reform in American Education*. Harvard Education Press ISBN 978-1-61250-556-5

Wiliam, D. (2011). *Embedded Formative Assessment*. Solution Tree Press ISBN 978-1-934009-30-7

Burgess, D. (2012), *Teach Like a Pirate: Increase Student Engagement, Boost Your Creativity, and Transform Your Life as an Educator*. Dave Burgess Consulting, Inc ISBN-13: 860-1401291688; ISBN-10: 0988217600

Additional materials/resources we will be using:

Some required readings will be scanned and placed on blackboard or you will be provided with appropriate web links:

❖ Texas Essential Knowledge and Skills (TEKS) for all content areas and grade levels.
<http://ritter.tea.state.tx.us/rules/tac/chapter111/index.html>

❖ Texas College Readiness Standards
<http://www.thecb.state.tx.us/index.cfm?objectid=EADF962E-0E3E-DA80-BAAD2496062F3CD8>



❖ Common Core Standards

<http://www.corestandards.org/>

❖ These websites provide a wide selection of virtual manipulatives for teaching mathematics and science:

<http://nlvm.usu.edu/en/nav/vlibrary.html>

<http://teach.oetc.org/manipulatives/virtual-manipulatives-science-examples>

<http://nlvm.usu.edu/>

❖ Book "How Students Learn: Mathematics in the Classroom".

You can read it online at http://www.nap.edu/catalog.php?record_id=11101

❖ Book "How Students Learn: Science in the Classroom".

You can read it online at

<https://www.nap.edu/search/?term=How+Students+Learn%3A+Science+in+the+Classroom&x=0&y=0>

This course will integrate English Language Proficiency Standards (ELPS) for English Learners (ELs) in order to provide strategies for language acquisition and academic success in all content areas for students at different levels (beginning, intermediate, advanced, and advanced high) in the domains of listening, speaking, reading and writing. You can find the ELPS standards <http://ritter.tea.state.tx.us/rules/tac/chapter074/ch074a.html#74.4> and presentations about ELPS and Texas English Language Proficiency Assessment System (TELPAS) at <http://www.esc4.net/users/0001/docs2/122-ELPS.pdf>

Materials:

Bring Your Own Electronic Device [BYOD - if available and preferably a laptop or tablet/iPad].

PROFESSIONAL RESPONSIBILITIES:

MTAP Digital (e-) Portfolio: The Miner Teacher Assessment of Performance (MTAP) Digital Portfolio provides a mechanism for formative and summative assessment of student growth in UTEP's teacher preparation program. With the guidance of UTEP College of Education faculty, the MTAP Portfolio represents a way for students to demonstrate their professional knowledge, skills, and disposition as an emerging middle school (4-8) educator. MTAP content is based on the four domains of the Texas Teacher Evaluation and Support System (T-TESS): Planning, Instruction, Learning Environment, and Professional Practices and Responsibilities.



Specific Artifacts as assignments in SCED4367/4368:

Artifact I: Teaching Philosophy

Goals of the assignment

Begin developing your teaching philosophy by reflecting on:

1. Academic readings and assignments throughout your academic career;
2. Your observations of teaching and your own opportunities to teach;
3. Your beliefs about teaching.

Assignment directions

Part 1: Evaluate- learning theories and observations and teaching experiences.

Part 2: Critically analyze your beliefs about teaching and learning.

1. Answer the following questions and provide examples for each, when applicable:
 - a. Why do you want to be an educator?
 - b. How does your teaching philosophy align with learning theories?
 - c. How will learning theories guide your selection of teaching materials, activities, teaching components and assessments?
 - d. What are your learnings goals for your students? (i.e., competency, mastery, ability to think critically, ability to apply critical thinking to solve problems, etc.)
 - e. What are your learning environment goals for your students? (Positive rapport with students, classroom management, classroom routines, rewards systems, etc.)
 - f. What are your assessment and evaluation goals for your students? (beliefs are about grading, formative and summative, and assessment tools)
 - g. What are your goals as an aspiring educator and lifelong learner?
 - h. How will you improve your teaching and student learning (e.g. using student, administrative, and parental feedback)?
 - i. How will you establish effective collegial relationships and collaborate with your colleagues?

Part 3: Reflect on Part 1 & 2 and write your teaching philosophy, including an abstract- type summary of your philosophy.

1. Consider the observation experiences in the field; what have you learned through them?
2. Consider other teaching or field experiences and reflect on what you have learned.

Part 4: Reflection:

1. Reflect on all areas identified in Parts 1 & 2 and write a summary statement (at least one paragraph) of the most important aspects of your philosophy. Include one dynamic example of a goal for your future



students or your aspirations as a teacher. This statement gives the reader/listener an idea of what it would be like to be in your classroom. This summary statement can serve as your introduction to potential employers as you visit job fairs, school principals and human resource departments. You may also use it in written correspondence to potential employers. If you are unsure of how to begin, the following are suggestions to consider:

- a. How does learning happen?
- b. What is your focus to ensure student learning?
- c. What do you feel is the most important ingredient in teaching

2. Reflect on all areas identified in Parts 1 & 2 and write a 3-5 page paper (following APA format guidelines) that includes examples of student goals and your aspirations as a teacher, as you have identified above.

Your paper should include the following:

- a. Introduction. Begin with the summary statement of your beliefs about learning and teaching. Then include a short summary of the rest of your teaching philosophy.
- b. Body: This is an explanation (with specific examples) of how you will put your beliefs about teaching and learning into practice as a teacher. Discuss the learning theories that influence your philosophy and how the theories will guide your selection of teaching components, materials, activities and assessments. Refer to your evaluation and analysis of Part 1 & 2 above.
- c. Conclusion: Recap of your teaching philosophy.

Part 5: Upload your teaching philosophy to Blackboard Assignment

Artifact V & VI: ILC/Active Learning Lesson Plan and Implementation

Goals of the assignment

Students will do the following:

All students will construct, present and analyze a variety of lesson constructions utilizing the Tools, Tasks and Strategies (TTS) Framework (Giza & Kosheleva) and Technological Pedagogical Content Knowledge (TPACK) Framework (Mishra & Koehler). You will develop and implement a series of lessons using the Learning Cycle, 5-E Model, Fundamental 5 principles, and 'backwards design' model, analyzed using a modified lesson study approach. Each student will be prepared to facilitate interactive discussions with peers/students in class. You will teach the objectives of the selected content via videotape [self-created flip video] and facilitate your meta lesson using interactive, hands-on activities. Following flip video teaching presentation, you will facilitate providing content activities, and will help to maintain and encourage student interest and focus on conceptual understanding through a Socratic questioning dialog. You should also promote interaction within and among groups participating in content activities. The ultimate goal: by utilizing a blended classroom approach and through participation in hands-on activities, students will be actively constructing their own knowledge (Constructivism, Vygotsky) and deepen their understanding of mathematical and science concepts and procedures (collaboration and critical thinking) through integration of an inquiry-based, active learning approach.



The main criteria for evaluation of the organization and conduct of Video Presentation/ Lesson Facilitation (flip component) are as follows:

A. Content Activities design: Content activities should correspond to assigned topic.

The activities enhanced by your own ideas/examples from mathematics/science teaching observations, and ideas from other resources (provide proper references/citations for all the resources you will be using).

B. Content Area Knowledge: Confidence in the mathematics and/or science content area should be visible and identifiable. Awareness of various approaches addressing solution of the concept-related questions, and the ability to respond to various questions accurately should be present.

C. Level of challenge: Content activities should motivate students' learning and address creativity, critical and high-order thinking skills development.

D. Level of class involvement: You should demonstrate good communication skills, encourage students to share their ideas, and orchestrate the whole class discussion. Specifically, questions from other students and the instructor should be encouraged during the whole presentation (not just at the end). Number and type of questions asked, and answers provided would be one of the main criteria for evaluation.

E. Level of instructional materials preparation and application: The use of a variety of instructional materials including manipulatives, visuals, learning centers, and technology tools.

F. Written report (Lesson Plan describing activities, assessment, discussion questions, etc.)

G. **Time Frame:** The lesson presentation should not exceed **30 minutes**.

H. **Self-Created Video:** The student-created flip component should demonstrate basic skills in technological, pedagogical, and content knowledge involved in video teaching creation and should not exceed **10 minutes**.

I. The entire lesson, flip component and face-to-face teaching should not exceed 30 minutes and the entire 30 minutes be videotaped (done in class). You will have two (2) video links: flip component and actual lesson.

All student will also:

- Present a clear, well-organized lesson plan that integrates mathematics and/or science and literacy.
- Create a measurable lesson goal aligned to Texas Essential Knowledge and Skills, 7-12 Mathematics: <http://ritter.tea.state.tx.us/rules/tac/chapter111/index.html>, and/or Science <http://ritter.tea.state.tx.us/rules/tac/chapter112/index.html> English Language Proficiency Standards (ELPS) <http://ritter.tea.state.tx.us/rules/tac/chapter074/ch074a.html#74.4>, and Texas Essential Knowledge and Skills for Technology Applications <http://ritter.tea.state.tx.us/rules/tac/chapter126/ch126a.html>
- Utilize the Five E lesson plan format https://drive.google.com/file/d/1CM1PZ2m7sY_aLWe8LcDd7qndLdNvC9wL/view?usp=sharing — Engagement, Exploration, Explanation, Elaboration & Evaluation with technology integration to help students investigate the content topic and real-world problem.
- Display an in-depth knowledge of content subject topic and integrates mathematics and/or science learning objectives with real-world problems.
- Communicate clear task learning expectations, builds on students' prior knowledge and experiences, and uses effective questioning and discussion to target English Learners and students with differing needs.



- Select and identify domain specific (tier 3) academic content vocabulary needed by all students; Select and identify vocabulary and grammatical patterns (sentence frames or phrases) needed by English Learners in the class.
- Engage students in relevant learning of content topics through sequenced mathematics and/or science activities.
- Provide effective feedback by frequently checking for understanding.
- Provide opportunities for students to use technology to demonstrate their thinking and shared group work.

Assignment directions

Part 1: Develop a lesson plan that integrates mathematics and/or science content with literacy using the 5 E Model—engagement; exploration; explanation; elaboration

Part 2: Create a flip component (Lesson facilitation video) for the Explain component (no more than 10 minutes)

Part 3: Teach the lesson to peers/class.

Part 4: Reflect on the effectiveness of your integrated lesson plan and your implementation of the lesson.

Part 5: Reflect on all areas identified in Parts 1-4 and write a summary statement (at least one paragraph) of each of the components of the 5-E lesson plan. Include one dynamic example of how you, as a teacher, would adjust your lesson plan to address active learning. This statement gives the reader/listener an idea of what it would be like to be in your classroom.

Part 6: Submit your lesson plan, reflection (2-3 pages) and link to flip video on Blackboard Assignment.

Part 7: Complete peer evaluation/rating of your fellow students' lessons and teaching.

Part 1: Write the lesson plan

1. Create a lesson plan that integrates mathematics and/or science content that is applicable to the TEKS.
2. Identify the **grade level, content subject topic, literacy skills & technology integration**.
3. Write clear **goals** aligned to the TEKS standards. Clearly describe the technology integration aligned with the lesson goals.
4. Write the **TEKS standard(s) & ELPS standard (s)**.
5. Write a lesson plan (10 minute flip/20 minute F2F for total of 30 minutes) that scaffolds content, academic content language and learning for bilingual and differing needs students, and integrates technology using the 5-E Lesson plan format and clearly describe:
 - **ENGAGEMENT**--Describe the mathematics and/or science content topic and real-world problem. Describe how the content topic connects to students' prior knowledge and life experiences.
 - **EXPLORATION**--Describe the essential question to engage students in higher order thinking and problem solving. Describe the print and digital texts, technology, and resources used to explore the real world problem and content topic.
 - **EXPLANATION (Flip Video Component)** - Describe the academic content (mathematics and/or science) vocabulary, graphic organizers, and explicit teacher modeling practices to help students interact and explain academic content vocabulary in significant linguistic & cultural contexts.
 - **ELABORATION**--Describe the visuals and collaborative student learning structures to demonstrate



investigation and understanding of the content and real-world problem.

- **EVALUATION**—Describe the formative assessments embedded throughout the lesson to assess activation of prior knowledge, content mastery, and student participation.
- **CLOSURE** – Integrate a closing activity to anchor the lesson you have taught and may include formative evaluation, technology, real-world connections.

Part 2: Teach the lesson

1. Teach the lesson to your fellow students in class (as per schedule).
2. Submit the lesson plan as a Blackboard assignment.

Part 3: Reflect on the lesson plan and your teaching of the lesson. Analyze the effectiveness of your integrated lesson plan. Use the following to guide you in developing an analysis:

After teaching the lesson, **watch the video-clip** of you implementing the lesson. Analyze and take notes on the following questions:

- The alignment of the TEKS and how appropriate were the tasks for diverse learners.
- the establishment of collaborative learning opportunities that encouraged all students to use visual tools and technology
- how appropriate student time was provided to support deeper learning of mathematics and/or science
- how probing questions were developed and used to address students' misunderstandings (error analysis)
- how differentiated learning tasks were planned and utilized to address the individual needs of all learners
- how formative assessments /checking for understanding was used to monitor the quality of student participation and performance
- how instruction was planned and implemented to connect to background knowledge and real-world problems/topics
- What did I do well and what can I improve on?

Part 4: Reflect on all areas identified in Parts 1-3 and write a summary statement (at least one paragraph) of each of the components of the 5-E lesson plan. Include one dynamic example of how you, as a teacher, would adjust your lesson plan to address active learning. This statement gives the reader/listener an idea of what it would be like to be in your classroom.

Then write a reflection paper (2-3 pages), giving specific examples from your lesson plan and/or video analysis.

Note: You do *not* have to have *succeeded* in achieving all of these areas in your planning and teaching.

However, what is important for you to be successful in this assignment is for you to (a) recognize where you are in your progress towards mastery of these; and (b) explain where and how you still need to improve. As you reflect, address the in-depth questions listed below. Your paper should respond to each of these questions.

- A. How did I plan the lesson with clear goals aligned to the mathematics/science TEKS?
- B. How were students able to achieve the lesson's goals?
- C. How did I provide domain specific academic content vocabulary instruction that build on students' prior knowledge and experiences?
- D. How did I make plans to activate students' prior knowledge and teach the lesson to **engage** them in a task that made connections to students' real-world experiences?



- E. How did I plan and communicate structured tasks requiring students to use mathematics skills to **explore** questions and concepts about a topic and real-world problem?
- F. How did I plan and **explain** academic content vocabulary and did I model how to use literacy strategies to investigate the topic and real-world problem?
- G. How did I plan structured collaborative problem solving and solution seeking, and did I motivate students to **elaborate** and extend their conceptual understanding of the mathematics and/or science and real-world problem?
- H. How did I plan embedded formative assessments, and did I **evaluate** students' prior knowledge, content understanding, and participation?
- I. How did I plan a closing activity, and did I provide opportunities for student to assess their learning about the mathematics and/or science and real-world problem?
- J. What did I do well and what can I improve on?

Part 5: Submit your final lesson plan, reflection and link to flip video on Blackboard Assignment

Artifact A: Field-based Assignment: Active Field-Based Observations

Goals of the assignment

To help you synthesize your observations during the semester you will be required to submit 10 sets of Response to Observation Protocol (RtOP)/Field Notes [1 per class observed (45 minutes to 1 hour) for each of the 10 hours observed; if a "blocked" class, 1 per 90 minute class]. The Response to Observation Protocol (RtOP)/Field Notes should be your evaluation of each of the criteria, as well as analysis included in the reflection; authentic responses; anecdotal supporting evidence; and elaboration of points made. A *Course Calendar* identifying when to submit your Response to Observation Protocol (RtOP)/Field Notes is included in the syllabus. The Response to Observation Protocol (RtOP)/Field Notes support evaluation of your final reflection. This course requires 10 hours of observation in a public, charter, or private school setting in your content area, for grades 7-12 OUTSIDE of class time It your responsibility to obtain criminal background clearance for the district where observations will be completed (contact Human Resources Offices). It is your responsibility to contact the campus administration to schedule observations. Comply with professional code of conduct and appearance/dress code guidelines established by the districts. You are required to complete 10 hours observation in the classroom and/or attending professional learning community meetings, tutoring, parent-teacher conference, ARD/IEP session.

Assignment directions

There will be a [log-in sheet](#) to record your observation time that will be verified and observation notes (you will take notes every time you do your observation, based on the observation guidelines stated).

Part 1: print and read this instruction: [Observations Instruction](#).

Part 2: print out: *Active Observation Log*

<https://drive.google.com/file/d/1uvh7ZNkEdPdBtc21ELzmRwmkJeNDhtq5/view?usp=sharing>; complete log with required information



Part 3: schedule observation times

Part 4: complete the Response to Observation Protocol (RtOP)/Field Notes

Part 5: turn final verified and signed log as a hard copy on completion of the 10 hours of observation AND on the due date indicated in the *Course Calendar*.

Part 6: submit Response to Observation Protocol (RtOP)/Field Notes via Blackboard Assignment as completed and based on the due dates indicated in the *Course Calendar*.

Artifact B: Learning Center Facilitation Final Exam

Goals of the assignment

The goal of a learning center is to integrate hands-on activities (kinesthetic) that connect the mathematics and science concepts to concrete and/or real-world examples/activities. Additionally, students collaborate in problem solving and solution finding.

A team of 3-4 randomly assigned students will prepare a lesson plan (refer to rubric) based on a “Big Idea” and agreed supporting content topics that demonstrate cross-curricular connections. Lesson plan template is on the Blackboard for reference. Complete your team’s lesson plan in Google Doc. Please add me to your document. My email rllynch@utep.edu (as “Can edit”).

Assignment directions

Part 1: Each team will consult to determine the ‘Big Idea’/topic of lesson plan.

Part 2: Each team will prepare an 8-10-minute lesson and active learning lesson materials. Each learning center will have an 8 to 10-minute rotation. Assignment of student cooperative learning roles is essential to ensure active participation of all students in the group. Pacing and time management are critical to the success of the learning centers functionality.

Part 3: Each team member must print and complete the “Group Members Evaluation Form” located in Blackboard and in Rubrics <https://drive.google.com/file/d/1GHcjKVb-X9Jwh3jwHQa1qv9UvhO24OwR/view?usp=sharing>

Part 4: You must also evaluate your own contribution in completing this assignment.

Part 5: submit lesson plan and samples of hands-on activities on the google document. Feedback and grading will be done through google documents.

Estimated Total Possible Points [not inclusive of Extra Credit] = 400 to 600 Points



Guiding Principles for this Course: **TEXES Domains**

TeXes Mathematics Domains (7-12): cms.texas-ets.org/index.php/download_file/view/806/259/

TeXes Science Domains (7-12): cms.texas-ets.org/index.php/download_file/view/804/259/

Student Learning Outcomes

“Talent is a dreadfully cheap commodity, cheaper than table salt. What separates the talented individual from the successful one is a lot of hard work and study.” ~Stephen King.

The course’s learning outcomes will require the student to acquire throughout the semester knowledge and skills, and build upon them. The following table provides a list of the most relevant student learning outcomes for the course. The following outcomes are aligned with SBEC-approved Texas educator standards. Please, see the full standard* at

http://tea.texas.gov/Texas_Educators/Preparation_and_Continuing_Education/Approved_Educator_Standards/

Table 1. Student learning outcomes and assessment

Student Learning Outcomes		Formative & Summative Assessments
TeXes 7-12	By the end of the course, the student will be able to:	To evaluate these outcomes, the faculty member will use the following assessment procedures:
V, VI	Develop an understanding of current issues, practices and directions in mathematics and science curriculum and the ability to inquire into these.	a. Class and online interactive, Socratic discussions b. Quizzes and Exams c. Written Reflections
V, VI	Develop knowledge and skills in educational research	a. Class and online interactive, Socratic discussions b. Lesson Plan Development c. Quizzes and Exams c. Written Reflections
V, VI	Identify and Analyze topics of importance in current mathematical and science education	a. Class and online interactive, Socratic discussions b. Electronic Databases Literature Searches c. Quizzes and Exams c. Written Reflections
ALL	Deepen their commitment to their pupils’ learning of mathematics and science	a. Pre/Post Test b. Pre/Post Survey c. Comprehensive Exams d. Written Reflections
ALL	Increase their confidence to teach mathematics and/or science	a. Mini-Teaching Exercise b. Pre/Post Survey c. Written Reflections d. Self and Peer Feedback and Ratings

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V, VI	Improve their ability to manage and assess their pupils' mathematics and science learning. Discover innovative methods of instruction to increase effectiveness and pupils' engagement, learning, and thinking.	a. Class and online interactive, Socratic discussions b. Quizzes and Exams c. Written Reflections d. Mini-Teaching Exercise
ALL	Improve their capacity to think reflectively and creatively about their teaching of mathematics and/or science.	a. Class and online interactive, Socratic discussions b. Quizzes and Exams c. Written Reflections d. Mini-Teaching Exercise
ALL	Increase their capacity to become an agent of change in the field of mathematics and/or science education through effective teaching and communication.	a. Class and online interactive, Socratic discussions b. Lesson Plan Development c. Electronic Databases Literature Searches c. Written Reflections d. Pre/Post Survey
ALL	Develop knowledge and strategies to design curriculum at classroom and school levels.	a. Class and online interactive, Socratic discussions b. Lesson Plan Development c. Electronic Databases Literature Searches c. Written Reflections

POLICIES:

A. Grading Scale

Excellent	Above Average	Average	Below Average	Failing
A = 90 – 100%	B = 80 – 89%	C = 70 – 79%	D = 60 – 69%	F = 59% and below

B. Penalties

Assignments are to be submitted through Blackboard Assignment/Googledocs on the date indicated by 11:59 PM. If assignments are submitted late, 20% of the grade value will be deducted.

C. Standards of Academic Integrity

Students are expected to uphold the highest standards of academic integrity. Any form of scholastic dishonesty is an affront to the pursuit of knowledge and jeopardizes the quality of the degree awarded to all graduates of UTEP. Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are not attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts. Proven violations of the detailed regulations, as printed in the Handbook of Operating Procedures (HOP) and available in the Office of the Dean of Students, may result in sanctions ranging from disciplinary probation, to failing grades on the work in question, to failing grades in the course, to suspension or dismissal among others.



D. Students with Disabilities

If you have or believe you have a disability, you may wish to self-identify. You can do so by providing documentation to the Office of disabled Student Services located in Union E Room 203. Students who have been designated as disabled must reactivate their standing with the Office of Disabled Student Services on a yearly basis. Failure to report to this office will place a student on the inactive list and nullify benefits received. If you have a condition which may affect your ability to exit safely from the premises in an emergency or which may cause an emergency during class, you are encouraged to discuss this in confidence with the instructor and/or the director of Disabled Student Services. You may call 747-5148 for general information about the Americans with Disabilities Act (ADA).

E. 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>>.

Inclusiveness and equity

Learning happens only when we feel respected as a whole human being. My top priority in our classroom is to cultivate relationships of trust and respect and a sense that we see each other as whole, complex human beings. That you experience this in our classroom is important for the sake of your learning in our course *and* for the sake of your future students' learning, so that you feel able to cultivate such relationships with them. To that end, I want you to know that all of you is welcome in our classroom space—all the parts of you as a person are welcome in our discussions, our activities, our assignments, and in our assessments. We are all complex people with a variety of perspectives, experiences, challenges, assets, and resources—our gender identities, our sexual orientations, our religions, our races, our ethnicities, our economic statuses, our immigration statuses, our parenthoods, our veteran statuses, our ages, our languages, our abilities and disabilities. All the parts of you are welcome in our learning community to the extent that you feel comfortable bringing them in. I strive to show respect for the variety and wholeness in each of you, and I expect that each of you shows respect for each other as well. If you feel marginalized in our class, and you feel comfortable discussing it, I would like to know so that I can support you, protect you, and make changes that feel more inclusive and equitable. You can also talk with our Department Chair and/or you can report a complaint of discrimination to the University's Equal Opportunity Office, Kelly Hall, Third Floor, 915-747-5662 or eoaa@utep.edu.



F. Professionalism

- Consistent attendance, punctuality, collegiality, supportive critique and professionalism will be expected
- Course expectations:
 - Attend meetings when you are scheduled to attend meetings (meetings with peers, instructor, whole class, etc./ Face-to-face (F2F) or on-line);
 - Come to the class and stay for the entire class
 - Do not be distracted during scheduled meeting (you need to be present and focused; F2F and on-line);
 - Be prepared to raise, share, discuss and attempt to solve any individual or collective problems you may have with your colleagues and/or your instructor in constructive ways that allows us all to maintain our dignity and continue to function effectively as a community.
 - Demonstrate an understanding that while we can, and will probably, disagree, we need to do so within a community of respect; and
 - Provide your classmates with supportive critique and constructive feedback.

G. Extra Credit:



You will have opportunities to receive extra credit as suggested or approved by the Instructor. For example, you may be invited to participate in service learning, tutoring, participate in College of Education focus groups, surveys, conferences, volunteer as science fair judge, etc. Bonus points will be given for attendance at a math or science-related, education conference, upon submission of a summary of your learning experience as a result of attending the conference. This summary must be 1 page typed, double spaced, 12-point font, and may include artifacts from the conference as attachments.

TEACHER EDUCATION DEPARTMENT
COLLEGE OF EDUCATION
UNIVERSITY OF TEXAS AT EL PASO





Tentative Schedule Spring 2019
SCED4367/4368 Secondary Mathematics/Science
Thursday, 3:00 – 5:00pm Face-to-Face/5:00 – 5:50 pm Lab EDUC405

NOTE: All topics, assignments, and due dates are subject to change at the instructor’s discretion

Class/ Date	Topics	Lab Topics/Activities	Hands-on Activities	Assignments Due
Module 01: Introduction, Constructivism, Pedagogical Framework				
Week 1: January 24 	Orientation to course: Syllabus & Schedule Course structure: Discussion TPACK/SCK/Tools, Tasks & Strategies: “What Is Technological Pedagogical Content Knowledge?” and “Specialized Content Knowledge”.	Complete Seed Discussion Organizer https://drive.google.com/file/d/128_E4rwJ5cB4ewTyaEkOxMCGOAS_6jpl/view?usp=sharing for Assignment Readings Submit on Blackboard by January 30 at 11:59 pm (20 points) Gmail Account/Google Drive	<ul style="list-style-type: none"> Entrance Ticket (5 points) Set Up google account 	<ul style="list-style-type: none"> Math Read “<i>The Art of Teaching</i>”, Chapter 1, Sobel & Maletsky, pp 1- 32 and “<i>Why & How to Differentiate Math Instruction</i>”, Small & Lin, pp. 1-16. Science Read: Chapter 1 and 2 in <i>Action Science</i>, pp 1-19 Complete Seed Discussion Organizer https://drive.google.com/file/d/128_E4rwJ5cB4ewTyaEkOxMCGOAS_6jpl/view?usp=sharing for Readings & Class Discussion Submit on Blackboard by January 30 at 11:59 pm (20 points)
Week 2: January 31 	Review Tools, Tasks and Strategies. Using the posted lesson plan, identify components that are Tools, Tasks and Strategies.	Review NASA 5-E cross- curricular Lesson Plan https://nasaclips.arc.nasa.gov/teachertoolbox/the5e and e-clips using : https://nasaclips.arc.nasa.gov/video/launchpad/launchpad-solar-eclipses	<ul style="list-style-type: none"> Entrance Ticket (5 points) NASA Resource Review 	Complete Lesson Plan/TTS identification. Math Sample https://drive.google.com/file/d/16sHba-1SMqTgtlHiZyIQraexLqy3yvie/view?usp=sharing Science Sample https://drive.google.com/file/d/1Qtw5O2KtICXS_8Uz8I-CofwjT5LAYB8J/view?usp=sharing Submit word document/.pdf on Blackboard by February 6 at 11:59 pm (20 points)


***Response to Observation Protocol/Field Notes may be submitted in advance of the due dates; the due dates are guides for pacing of observation hours.**



Class/ Date	Topics	Lab Topics/Activities	Hands-on Activities	Assignments Due
Module 02: Active Classroom Observation				
Week 3: February 7 	<ul style="list-style-type: none"> Utilize class time to complete classroom observations. Log: https://drive.google.com/file/d/17ag58FygSCijEniyWnpyDcEk6bl_9ZpZ/view?usp=sharing Instructions: https://drive.google.com/file/d/17hpBn-2LOGq0dY_WkZ7qw616aAOZ_OTF/view?usp=sharing Field Notes: https://drive.google.com/file/d/1zhK_MYqZyIG4ZGtm-PzoyekCTd6uRM8F/view?usp=sharing 		<ul style="list-style-type: none"> Elements of a Project-Based or Problem-Based Classrooms <p>“Why Problem-Based Learning Is Better”. Posted by Tim Holt on Jan 10, 2013 in Less Teacher, More Student, Making The Shift, The How of 21st Century Teaching, Voices http://plpnetwork.com/2013/01/10/problem-vs-project-based-learning/</p> <p>“Personalized PBL -Student Designed Learning” http://www.edutopia.org/blog/personalized-pbl-student-designed-learning-andrew-miller</p> <ul style="list-style-type: none"> Compare & Contrast Organizer synthesizing both articles [20 POINTS] <p>Due: February 13 at 11:59 pm</p>	
Module 3: Learning through Discovery –Vocabulary, Assessment, and Lesson Planning				
Week 4: February 14 	Elements of Curriculum/Lesson Planning: 5-E Model Introduction to Depth of Knowledge/Blooms Revised Taxonomy Lesson Cycle Inquiry-Based/Collaborative/Cooperative/Active Learning Critical Thinking Skills Effective Questioning	<ul style="list-style-type: none"> Review Texas Essential Knowledge and Skills (TEKS) for individual content areas http://ritter.tea.state.tx.us/rules/tac/chapter111/index.html Select a TEKS and Student Expectation (Task) for mini teaching assignment <ul style="list-style-type: none"> Begin to develop Draft#1 of Lesson Plan & scripting/design of flip video. <p>Resources about flip components in classrooms:</p> <ul style="list-style-type: none"> “Schools Mix One-to-One with a Helping of BYOD” http://www.edtechmagazine.com/k12/article/2014/06/schools-mix-one-one-helping- 	<ul style="list-style-type: none"> Entrance Ticket (5 points) Develop 3 foldables /graphic organizers (15 points) 	Math Read: “ <i>Motivating Mathematical Learning</i> ” Chapter 2, Sobel & Maletsky, pp 33-64. Science Read: “ <i>Linking Pedagogy and Science Content in Practice</i> ” in Action Science, pp 31-40 Use the information in the readings to instigate thought about your 1st lesson plan draft. Develop: <ul style="list-style-type: none"> Draft#1 of Lesson Plan (Engage, Explore & Explain components) & scripting/design of video (Explain component). Due February 20 at 11:59 pm Submit on Blackboard Assignment <p><u>Bring printed copy of Draft#1 to next class February 21</u></p>




TEACHER EDUCATION DEPARTMENT
COLLEGE OF EDUCATION
UNIVERSITY OF TEXAS AT EL PASO



Class/ Date	Topics	Lab Topics/Activities	Hands-on Activities	Assignments Due
	<p>Academic Vocabulary:</p> <p>Building academic content vocabulary & addressing the needs of English Learners (ELs)</p>	<p>byod, “6 IT Solutions to BYOD” https://drive.google.com/file/d/1dkm919zBWEW511fFyqJuM_7K-I-xiHW/view?usp=sharing “Upside Down and Inside Out: Flip Your Classroom to Improve Student Learning” https://drive.google.com/file/d/1vGRrFAo-RP1VIaTomn0TuMjAODfwmWO/view?usp=sharing “Things you should know about flipped classrooms” https://drive.google.com/file/d/1k4Eevninmtkuihp3Ni8Bivq0MufosvKF/view?usp=sharing “Flipping the Classroom” https://drive.google.com/file/d/1xe3Nt_gloI_BzGCTdt-tUqmY1ZoxVg12/view?usp=sharing</p>		
<p>Week 5: February 21</p> 	<ul style="list-style-type: none"> • Educative (Formative) Assessment: Formative Assessment • Peer Review of Draft #1 of Lesson Plan 	<p>Readings:</p> <ul style="list-style-type: none"> • Math Read: <i>“Motivating Problem Solving Instruction”</i>, Chapter 3, Sobel & Maletsky, pp.65 – 88 • Science Read: <i>“Unlocking Resources for Active Learning”</i> in Action Science, pp 51-60 <p>Use the information in the readings to instigate thought about your 2nd lesson plan draft.</p>	<ul style="list-style-type: none"> • Entrance Ticket (5 points) • Lesson Plan Development/ Collaboration/ Peer Feedback 	<ul style="list-style-type: none"> • Develop Draft #2 (All components) of Lesson Plan (20 Points) using the TEKS you chose as the Objective • Identify (highlight) the tools, tasks, & strategies that integrate active learning and problem solving in Draft#2 of your lesson plan. • Submit on Blackboard Assignment • Due February 27 at 11:59 pm




TEACHER EDUCATION DEPARTMENT
COLLEGE OF EDUCATION
UNIVERSITY OF TEXAS AT EL PASO



Class/ Date	Topics	Lab Topics/Activities	Hands-on Activities	Assignments Due
Module 04: Lesson Planning, Active Learning, Integrating Technology				
Week 6: February 28 	<ul style="list-style-type: none"> Active Learning Introduction to Learning Centers 	<ul style="list-style-type: none"> Math Read: “Activities in Algebra”, Chapter 5, Sobel & Maletsky, pp. 128 -162 Math Read: “Algebra”, Chapter 2, Small & Lin, pp. 17 – 62. Science Read: “Action Science Classroom Activities”, Chapter 8, in Action Science, pp 69-124. <p>Use the information in the readings to instigate thought about your Final lesson plan draft.</p> <p>Begin Draft #1 of Teaching Philosophy</p>	<ul style="list-style-type: none"> Entrance Ticket (5 points) Artifacts from Learning Centers (20 points) Teaching Philosophy Draft #1 	<ul style="list-style-type: none"> Lesson Plan Final Development Flip Video Production Submit Lesson Plan on Blackboard Instructor feedback will be on Blackboard Submit Draft #1 Teaching Philosophy on Blackboard Instructor Feedback on Blackboard Due March 6 at 11:59 pm
Educator’s Blended Mini-Lesson Plans Showcase				
Week 7: March 7 	<ul style="list-style-type: none"> 3 scheduled students to teach their mini-lesson to the class Complete 3 peer ratings of active learning lessons taught by fellow students 		Entrance Ticket (5 points) Student Participant/Observer Exit Ticket: Peer Feedback/ratings (10 points)	<ul style="list-style-type: none"> Prepare Mini-Lesson Submit Final Lesson Plan and Materials used <u>after</u> teaching Submit Teaching/Video Review Reflection <u>after</u> teaching Submit RtOP/Field Notes for Observation #1 & #2* Due: March 13 by 11:59 pm
Week 8: March 14 	<ul style="list-style-type: none"> 3 scheduled students to teach their mini-lesson to the class Complete 3 peer ratings of active learning lessons taught by fellow students 		Entrance Ticket (5 points) Student Participant/Observer Exit Ticket: Peer	<ul style="list-style-type: none"> Prepare Mini-Lesson Submit Final Lesson Plan and Materials used <u>after</u> teaching Submit Teaching/Video Review Reflection <u>after</u> teaching Submit RtOP/Field Notes for Observation #3 & #4*




TEACHER EDUCATION DEPARTMENT
COLLEGE OF EDUCATION
UNIVERSITY OF TEXAS AT EL PASO



Class/ Date	Topics	Lab Topics/Activities	Hands-on Activities	Assignments Due
			Feedback/ratings (10 points)	<ul style="list-style-type: none"> Due: March 21 by 11:59 pm
Spring Break March 18-22				
Week 9: March 28 	<ul style="list-style-type: none"> 4 scheduled students to teach their mini-lesson to the class Complete 4 peer ratings of active learning lessons taught by fellow students 		Entrance Ticket (5 points) Student Participant/Observer Exit Ticket: Peer Feedback/ratings (10 points)	<ul style="list-style-type: none"> Prepare Mini-Lesson Submit Final Lesson Plan and Materials used <u>after</u> teaching Submit Teaching/Video Review Reflection <u>after</u> teaching Submit RtOP/Field Notes for Observation #5 & #6* Due: April 3 by 11:59 pm
Week 10: April 4 	<ul style="list-style-type: none"> 4 scheduled students to teach their mini-lesson to the class Complete 4 peer ratings of active learning lessons taught by fellow students 		Entrance Ticket (5 points) Student Participant/Observer Exit Ticket: Peer Feedback/ratings (10 points)	<ul style="list-style-type: none"> Prepare Mini-Lesson Submit Final Lesson Plan and Materials used <u>after</u> teaching Submit Teaching/Video Review Reflection <u>after</u> teaching Submit RtOP/Field Notes for Observation #7 & #8* Due: April 10 by 11:59 pm
Week 11: April 11 	<ul style="list-style-type: none"> 4 scheduled students to teach their mini-lesson to the class Complete 4 peer ratings of active learning lessons taught by fellow students 		Entrance Ticket (5 points) Student Participant/Observer Exit Ticket: Peer Feedback/ratings (10 points)	<ul style="list-style-type: none"> Prepare Mini-Lesson Submit Final Lesson Plan and Materials used <u>after</u> teaching Submit Teaching/Video Review Reflection <u>after</u> teaching Submit on Blackboard Due April 17 at 11:59 PM


TEACHER EDUCATION DEPARTMENT
COLLEGE OF EDUCATION
UNIVERSITY OF TEXAS AT EL PASO



Class/ Date	Topics	Lab Topics/Activities	Hands-on Activities	Assignments Due
Week 12: April 18 	<ul style="list-style-type: none"> 3 scheduled students to teach their mini-lesson to the class Complete 3 peer ratings of active learning lessons taught by fellow students 		Entrance Ticket (5 points) Student Participant/Observer Exit Ticket: Peer Feedback/ratings (10 points)	<ul style="list-style-type: none"> Prepare Mini-Lesson Submit Final Lesson Plan and Materials used <u>after</u> teaching Submit Teaching/Video Review Reflection <u>after</u> teaching Submit RtOP/Field Notes for Observation #9 & #10* Teaching Philosophy Final Submission Due: April 24 by 11:59 pm
Week 13: April 25 	<ul style="list-style-type: none"> 3 scheduled students to teach their mini-lesson to the class Complete 3 peer ratings of active learning lessons taught by fellow students 		Entrance Ticket (5 points) Student Participant/Observer Exit Ticket: Peer Feedback/ratings (10 points)	<ul style="list-style-type: none"> Submit Final Lesson Plan and Materials used <u>after</u> teaching Submit Teaching/Video Review Reflection <u>after</u> teaching Teaching Philosophy Final Submission Due: May 1 by 11:59 pm
Final Exam and Preparation: Active Learning with Learning Centers				
Week 14: May 2 	With your Learning Center Collaborators and using the Google document template : <ul style="list-style-type: none"> Develop a hands-on learning center to present the concept for the May 9th class. Prepare Active Learning Activities, Assessment, Instructions, Rehearse (for pacing) Students will rotate through the learning centers. Be explicit in written directions and materials creation/ manipulation. If you need specific manipulatives such as calculators, rulers, paper, etc., email (rlynch@utep.edu) the needs to me by May 4th Completion of the task in the learning center should take approximately 10 minutes. 			<ul style="list-style-type: none"> Complete Course Evaluation Finalize observation Log & Outstanding RtOP/Field Notes Active Learning Lesson Final Reflection Due May 8 at 11:59 pm
Week 15: May 9	Final Exam: Learning Centers Lesson Plans (100 points)/Implementation and Active Participation in Learning Centers		<ul style="list-style-type: none"> Entrance Ticket (5 points) Learning Center Artifacts and 	<ul style="list-style-type: none"> Original Observation Hours Log Due; <u>turn in at the end of class</u> Final Observation reflection Due May 9 at 11:59 pm Extra Credit (2 points added to final grade): Course evaluation [send

TEACHER EDUCATION DEPARTMENT
COLLEGE OF EDUCATION
UNIVERSITY OF TEXAS AT EL PASO



Class/ Date	Topics	Lab Topics/Activities	Hands-on Activities	Assignments Due
			Ratings (30 points)	email to me (rlynch@utep.edu) stating you completed the survey].

Total Estimated Possible Course Points [not including *Extra Credit Points*] = 500 to 600 points

Final Word: I reserve the right to adjust the course syllabus or change assignments as needed.

Artifact I: Teaching Philosophy– 100 points			
Criteria/ Standard	Exceeds Standard	Meets Standard	Does Not Meet Standard
Depth of Reflection	Response demonstrates an in-depth reflection on, and personalization of the performance data, data analyses, concepts, and/or strategies presented in the lesson plans.	Response demonstrates a general reflection on, and personalization of the performance data, data analyses, concepts, and/or strategies presented in the lesson plans.	Response demonstrates a lack of reflection on, and personalization of the performance data, data analyses, and/or strategies presented in the lesson plans
Viewpoints	Viewpoints & interpretations are insightful & well supported. Clear, detailed examples are provided as applicable.	Viewpoints & interpretations are supported. Appropriate examples are provided as applicable.	Viewpoints & interpretations are missing, inappropriate, and/or unsupported. Examples, when applicable are not provided.
Evidence & Practice	Essay shows strong evidence of synthesis of ideas presented and insights gained in this assignment. The implications of these insights for the respondent’s overall teaching practice are thoroughly detailed.	Essay shows evidence of synthesis of ideas presented and insights gained in this assignment. The implications of these insights for the respondent’s overall teaching practice are presented.	Essay shows no evidence of synthesis of ideas presented and insights gained in this assignment. No implications for the respondent’s overall teaching practice are presented.
Self-Evaluations	Self-evaluation shows personal development related to goals set for this assignment.	Self-evaluation shows assessment of progress connected to goals set for this assignment.	Self-assessment is generalized, superficial and not connected to the goals set for this assignment.
Mechanics	Writing is clear, concise & well organized with excellent sentence/paragraph construction. Thoughts are expressed in a coherent &	Writing is mostly clear, concise & well organized with good sentence/paragraph construction. Thoughts are expressed in a coherent &	Writing is unclear and disorganized. Thoughts ramble & make little sense. There are numerous spelling, grammar, or syntax errors

TEACHER EDUCATION DEPARTMENT
COLLEGE OF EDUCATION
UNIVERSITY OF TEXAS AT EL PASO



	logical manner. There are no more than three spelling, grammar, or syntax errors per page of writing.	logical manner. There are no more than five spelling, grammar, or syntax errors per page of writing.	throughout the response.
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Artifact V & VI: Active Learning Lesson Plan and Implementation - 100 points			
Category	Exceeds Standard	Meets Standard	Does Not Meet Standard
Structure (T-TESS Dimensions 1.1, 1.3, 1.4)	Lesson Plan format is concise addressing universal design and makes connections to student needs. Included are the elements of Active Learning, Inquiry-based, TPACK, with differentiation that addresses prior knowledge, real world connections, identified (data-driven) student strengths and knowledge gaps.	Lesson Plan format is somewhat concise addressing some of the following areas: universal design and makes connections to student needs. Included are some of the elements of Active Learning, Inquiry-based, TPACK, with differentiation that addresses prior knowledge, real world connections, identified (data driven) student strengths and knowledge gaps.	Lesson Plan format is disorganized and does not include components addressing universal design and makes connections to student needs. The elements of Active Learning, Inquiry-based, TPACK, with differentiation that addresses prior knowledge, real world connections, identified (data driven) student strengths and knowledge gaps are not included.
Content (T-TESS Dimension 2.1)	Texas Essential Knowledge and Skills and Learning objective are stated and addressed in the lesson structure. Active, constructive learning is promoted through discovery, critical-creative thinking and challenging expectations. Error Analysis and self-reflection are promoted resulting in student learning goal setting.	Texas Essential Knowledge and Skills and Learning objective are somewhat stated and addressed in the lesson structure. Active, constructive learning is primarily promoted through discovery, critical-creative thinking and challenging expectations. Error Analysis and self-reflection are somewhat promoted resulting in student learning goal setting.	Texas Essential Knowledge and Skills and Learning objective are not stated and addressed in the lesson structure. Active, constructive learning is not promoted through discovery, critical-creative thinking and challenging expectations. Error Analysis and self-reflection are not promoted and does not result in student learning goal setting.
Lesson Delivery (T-TESS Dimensions 2.3, 2.4)	Strategies for lesson delivery include interactive, hands-on approaches and differentiated instruction to address individual student needs and learning styles. Formative evaluation is integrated to insure content mastery (evidence based). Lesson delivery is literacy-based and provides opportunities for engagement through cross-curricular connections, and integration of varied tools and technology.	Strategies for lesson delivery somewhat includes interactive, hands-on approaches and differentiated instruction to address individual student needs and learning styles. Formative evaluation is somewhat integrated to insure content mastery (evidence based). Lesson delivery is somewhat literacy-based and provides some opportunities for engagement through cross-curricular connections, and has some integration of varied tools and	Strategies for lesson delivery does not include interactive, hands-on approaches and differentiated instruction to address individual student needs and learning styles. Formative evaluation is not integrated to insure content mastery (evidence based). Lesson delivery is not literacy-based and does not provide opportunities for engagement through cross-curricular connections, and does not have integration of varied tools and technology.

TEACHER EDUCATION DEPARTMENT
COLLEGE OF EDUCATION
UNIVERSITY OF TEXAS AT EL PASO



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Artifact A: Field-based Assignment: Response to Observation Protocol/ Field Notes - 10 points each possible				
CATEGORY	2	3	1	0
Observational Tool	Observation tool is complete and fully documents the classroom experience details such as quotes, diagrams and other explanations of practice.	Observation tool is relatively complete and partially documents the classroom experience.	Observation tool is not complete and inadequately documents the classroom experience.	Observation lacks any detail and does not document the classroom experience or is missing from the Field Notes altogether.
Connection to Standard	It is clear that there is a thorough understanding of the standard as there is a clear and well-documented connection based on the classroom observation.	The connection to the standard is present; however, the lack of clarity and detail does not fully demonstrate thorough understanding.	The connection to the standard is weak and not well aligned with classroom observation.	The connection to the standard is missing or the connection is not substantiated.
Connection to Text	The connection(s) to text informs the standard and is clearly aligned to the classroom observation and standard addressed.	The connection(s) to text is somewhat addressed; however, it does not fully inform the standard and is not thoroughly aligned to the classroom observation.	The connection(s) to text poorly informs the standard and is weakly aligned to the classroom observation.	The connection to text does not inform the observation or connection to the standard, or it is missing altogether.
Connection to Self	The connection to self is clearly tied to classroom observation, the standard addressed and text to inform what it means to be a teacher.	The connection to self is somewhat addressed; however, it is not clearly tied to classroom observation, the standard addressed and text to inform what it means to be a teacher.	The connection to self is weakly addressed, albeit somewhat tied to classroom observation, to the standard addressed and text to inform about what it means to be a teacher.	The connection to self is missing altogether or is not related to the observation, standard, or text.
Mechanics/Sources	There are no grammatical, spelling or punctuation errors. All sources (information and graphics) are accurately documented.	Very few grammatical, spelling or punctuation errors are present. All sources (information and graphics) are accurately documented.	Several grammatical, spelling, or punctuation errors are present. All sources (information and graphics) are accurately documented.	Ideas are distracted by too many grammatical, spelling or punctuation errors. Some sources are documented or are missing altogether.

TEACHER EDUCATION DEPARTMENT
COLLEGE OF EDUCATION
UNIVERSITY OF TEXAS AT EL PASO



Artifact B:Final Exam- Learning Center/ Lesson Plan – 100 points			
Category	Exceeds Standard	Meets Standard	Does Not Meet Standard
Points	100 - 67	66 - 34	33 - 0
<i>Structure (Tools)</i>	Lesson Plan format is concise and includes Cross-Curricular/Real-world Connections. Tools address types of learners: kinesthetic, visual and auditory.	Lesson Plan format is somewhat concise and includes most Cross-Curricular/ Real-world Connections. Tools address types of learners: kinesthetic, visual and auditory.	Lesson Plan format is not concise and does not include Cross-Curricular/Real-world Connections. Tools do not address types of learners: kinesthetic, visual and auditory.
<i>Content (Tasks)</i>	Texas Essential Knowledge and Skills and Learning objective are stated and learning processes are clear and concise.	Texas Essential Knowledge and Skills and Learning objective are stated and learning processes are somewhat clear and concise.	Texas Essential Knowledge and Skills and Learning objective are not stated and learning processes are not clear and concise.
<i>Lesson Delivery (Strategies)</i>	Strategies for lesson delivery include interactive, hands-on approaches and differentiated instruction. Technology & Inquiry-Based/Active learning is embedded in lesson delivery.	Strategies for lesson delivery include some interactive, hands-on approaches and differentiated instruction. Technology & Inquiry-Based/Active learning is somewhat embedded in lesson delivery.	Strategies for lesson delivery does not include interactive, hands-on approaches and differentiated instruction. Technology & Inquiry-Based/Active learning is not embedded in lesson delivery.

Artifact : FINAL FIELD-BASED OBSERVATION REFLECTIVE ESSAY RUBRIC (30 points)			
	Exceeds Standard 6 - 4	Meets Standard 3-2	Does Not Meet Standard 1-0
1. Depth of Reflection	Response demonstrates an in-depth reflection on, and personalization of, the theories, concepts, and/or strategies presented	Response demonstrates a general reflection on, and personalization of, the theories, concepts, and/or strategies presented	Response demonstrates a lack of reflection on, or personalization of, the theories, concepts, and/or strategies presented
2. Viewpoints	Viewpoints and interpretations are insightful and well supported. Clear, detailed examples are provided, as applicable.	Viewpoints and interpretations are supported. Appropriate examples are provided, as applicable	Viewpoints and interpretations are missing, inappropriate, and/or unsupported. Examples, when applicable, are not provided.
3. Evidence and Practice	Essay shows strong evidence of synthesis of ideas presented and insights gained throughout the assignment placement. The implications of these insights for	Essay shows evidence of synthesis of ideas presented and insights gained throughout the assignment placement. The implications	Essay shows no evidence of synthesis of ideas presented and insights gained throughout the assignment placement. No implications for the

TEACHER EDUCATION DEPARTMENT
COLLEGE OF EDUCATION
UNIVERSITY OF TEXAS AT EL PASO



	the respondent's overall teaching practice are thoroughly detailed, as applicable.	of these insights for the respondent's overall teaching practice are presented, as applicable.	respondent's overall teaching practice are presented, as applicable.
4. Self-Evaluations	Self-evaluation shows personal development related to goals set in the experiences.	Self-evaluation shows assessment of progress connected goals set in the experiences. Reflections are thoughtful and specific.	Self-evaluation is generalized, superficial and not connected to goals set in earlier the experiences.
5. Mechanics	Writing is clear, concise, and well organized with excellent sentence/paragraph construction. Thoughts are expressed in a coherent and logical manner. There are no more than three spelling, grammar, or syntax errors per page of writing.	Writing is mostly clear, concise, and well organized with good sentence/paragraph construction. Thoughts are expressed in a coherent and logical manner. There are no more than five spelling, grammar, or syntax errors per page of writing.	Writing is unclear and disorganized. Thoughts ramble and make little sense. There are numerous spelling, grammar, or syntax errors throughout the response.

Artifact (Embedded in Multiple Assignments): Short Reflections - up to 30 points			
Category	Exceeds Standard	Meets Standard	Does Not Meet Standard
Points	20-15	14-7	6-0
Prompt(s) are addressed Shows consideration of the topic(s) Mechanics	The piece is thoughtful, engaging, and clearly written. The piece shows careful consideration of the topic at hand. It responds directly to the question or prompts and makes meaningful connections with the readings and course content. The piece has been proofread. Follows APA format	Shows adequate reflection along with some level of thoughtfulness, and may or may not have responded directly to the question or prompt. It also contains grammatical or sentence structure errors that disrupt the flow of the narrative. Follows parts of APA format	Does not adequately address the question or prompt, and shows limited thoughtfulness. Does not follow APA format.

TEACHER EDUCATION DEPARTMENT
COLLEGE OF EDUCATION
UNIVERSITY OF TEXAS AT EL PASO



Class Attendance and Participation – 30 points				
Component	Target 10 - 9	Acceptable 8 - 7	Fair 6 - 5	Poor < 5
Attendance	Student was present for every class	Student was absent for 1 class but provided instructor with a reasonable excuse.	Student was absent for 2 classes but provided instructor with reasonable excuses.	Student was absent for more than 2 classes and/or did not provide instructor with reasonable excuses.
Punctuality	Student was always on time for class and often arrived early.	Student was usually on time or early for class (was tardy to class only 1 or 2 times).	Student was sometimes on time (was tardy to class 3 times), but rarely arrived early.	Student was rarely on time or early (was tardy to class 4 or more times).
Level of Engagement and Behavior	Student brought original thought and perspective to class discussions. Student was fully engaged and actively involved during every class. They also worked cooperatively and well with all of their peers.	Student often participated freely in class, asked questions, and participated in discussions/work with peers cooperatively.	Student sometimes participated in class without being prompted but was reluctant to join in discussions/work with peers.	Student rarely participated in class discussions or asked questions. Interaction with peers was minimal.
Preparation	Student is always prepared for class with completed assignments and necessary materials. Student has also sought additional help between classes if necessary.	Student is usually prepared for class with completed assignments and necessary materials.	Student is sometimes prepared with most of the assignment completed and with the required materials.	Student is usually unprepared for class. Assignments/quizzes are not fully completed and/or they do not have other required materials.