

University of Texas at El Paso College of Education

ECED 5354

CRN: 29142

Development of Mathematics and Science Concepts in Young
Children

Spring 2022

Instructor Contact Information

This course is taught by Dr. Olga Kosheleva.

Dr. Kosheleva may be contacted within the Blackboard course system or by email at olgak@utep.edu.

Dr. Kosheleva's UTEP website can be found at the following URL address_

<http://www.cs.utep.edu/vladik/olgavita.html>

Instructor Office Hours: ONLINE (Mondays, 7 - 9:10 pm), or by appointment.

Course Description: This course focuses on the early STEM (Science, Technology, Engineering and Mathematics) learning of young children and the use of culturally relevant teaching methods and materials to support STEM development. It covers how environmental interactions, socio-cultural relationships and STEM process skills/practices form the basis of early problem solving, critical thinking and domain-relevant concept development. Students will synthesize differing views of STEM learning, Inquiry-based learning pedagogy and current research to create curricula that support diverse STEM learners in the Early Childhood classroom.

Course Overview/Format

This course will be conducted fully online [there are no in-person/campus-based class meetings]. This is a fast-paced, intense 7-week course that covers the content typically taught in a 15-week semester. It runs on a Monday to Sunday schedule; coursework throughout the week is due on specific days/times, however, you are NOT required to be online at any specific time. The standard recommendation across the board by American universities is to plan for approximately three hours of study time for every one credit hour taken. Therefore, for this course, you can expect each week to spend 3 hours of class time + 9 hours of study and prep time, which equals approximately 12 hours per week devoted to this course. Please read the syllabus and information on the course site VERY carefully, understand what you need to do and when you need to do it, and then plan course study time in your week accordingly. If at any time you do not understand what to do or when to do it, you should contact Dr. Kosheleva immediately (olgak@utep.edu).

Course Goals

1. To prepare students to teach mathematics and science in an early childhood setting.
2. To inform students of state and national standards related to teaching early childhood mathematics and science.
3. To relate theoretical concepts to the real world of teaching.
4. To ensure early childhood (primary) teachers know how to utilize all resources, including online resources, technology, literature, to teach early childhood mathematics and science.

Required texts

This course does not require the purchase of a textbook. All the required readings and video/audio files for the course are provided in Blackboard via our course site, either as an attached PDF which can be downloaded or through a clickable Internet link. You are allowed access to one copy of any PDFs within the course site - per copyright law, they are not intended for further mass distribution.

Readings/video/audio files that are assigned by linking to the Internet are also subject to copyright law, but these links may be shared as they are open to the public.

Our online course site is copyrighted and is the property of UTEP and ECED faculty. Content from the course site, in part or whole, may not be shared or distributed without direct written permission.

Optional readings (free download).

During Week 1 your assignment is to Download ALL E-books provided in Optional Reading. You are required to use these resources in your submissions for Week 1- Week 7.

1. Book "STEM Integration in K-12 Education" (2014). You can read it online (this site also allows you free download of this e-book) at <https://www.nap.edu/download/18612>

2. Book "How Students Learn: History, Mathematics and Science in the Classroom" (2005). You can read it online (this site also allows you free download of this e-book) at http://www.nap.edu/catalog.php?record_id=10126

3. Book "Mathematics Learning in Early Childhood: Paths Toward Excellence and Equity" (2009). You can read it online (this site also allows you free download of this e-book) at http://www.nap.edu/catalog.php?record_id=12519

4. Book "Ready, Set, SCIENCE!: Putting Research to Work in K-8 Science Classrooms" 2008. You can read it online (this site also allows you free download of this e-book) at http://www.nap.edu/catalog.php?record_id=11882

5. Book "STEM Learning Is Everywhere Summary of a Convocation on Building Learning Systems" 2014. You can read it online (this site also allows you free download of this e-book) at <https://www.nap.edu/download/18818>

6. Book "Science for all children: A guide for improving elementary science education in your school district." You can read it online (this site also allows you free download of this e-book) at <https://www.nap.edu/catalog/4964/science-for-all-children-a-guide-to-improving-elementary-science>

7. Book "Science and Engineering in Preschool Through Elementary Grades: The Brilliance of Children and the Strengths of Educators (2021)" (this site also allows you free download of this e-book) at

<https://www.nap.edu/catalog/26215/science-and-engineering-in-preschool-through-elementary-grades-the-brilliance>

8. Book "Adding It Up: Helping Children Learn Mathematics". You can read it online (this site also allows you free download of this e-book)

<https://www.nap.edu/catalog/9822/adding-it-up-helping-children-learn-mathematics>

9. Book "Early Childhood Assessment: Why, What, and How." You can read it online (this site also allows

you free download of this e-book) at

http://www.nap.edu/catalog.php?record_id=12446

10. Booklets "Helping Your Children Learn Science" available (in both English and Spanish) at the Department of Education.

<https://www2.ed.gov/parents/academic/help/science/science.pdf>

<https://www2.ed.gov/espanol/parents/academic/ciencias/ciencias.pdf>

Texas Essential Knowledge and Skills [TEKS]. Available by grade level and content focus at:

<https://tea.texas.gov/curriculum/teks/>

Texas Early Learning Guidelines (2015).

Available at: <https://tea.texas.gov/pkg.aspx>

UT DANA center STEM resources

<https://www.utdanacenter.org/products/elementary-products>

<https://www.utdanacenter.org/products/mathematics-products>

<http://www.utdanacenter.org/sciencetoolkit/downloads/teks/science-teks-staar.pdf>

If you are planning to teach in another state, please, find the website where your state standards for mathematics and science are provided.

National Association for Education of Young Children (NAEYC)

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

National Science Teachers Association (NSTA)

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

Next Generation Science Standards [NGSS]. Available at:

<https://www.nextgenscience.org>

National Council for Teachers of Mathematics (NCTM)

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

NAEYC Developmentally Appropriate Practice [DAP]. Available at:

<https://www.naeyc.org/resources/topics/dap>

Common Sense Media Non-profit. (for Technology) Available at:

<https://www.commonsensemedia.org/about-us/our-mission>

American Society for Engineering Education [ASEE]. Available at:

<https://www.asee.org/>

Information about HB 2504 Requirements

Texas House Bill 2504 requires each institution of higher education's faculty to provide the following syllabus related items, at a minimum:

1. A brief description of each major course requirement, including each major assignment and examination
2. the learning objectives for the course
3. a general description of the subject matter of each lecture or discussion
4. and, list of any required or recommended readings (provided above).

HB 2504 requirement 1. Course requirements, assignments, examination:

Course Policy/Requirements

To be successful in this course, class functionality, assignments and activities rely heavily on your understanding of class expectations. You are also responsible for doing all the work and going over the course readings every week. The Online courses take as much, if not more time than traditional classes. Please check course announcements at every day to keep yourself abreast of any changes in course content and deadlines.

1. It is required that you have a UTEP e-mail. You must use your UTEP email account for all correspondence related to this course and check it regularly to ensure that you receive important messages about the course on a timely basis. If you are enrolled in this course, you already have an email account created for you. If you do not remember your UTEP email address and password, please call 915-747-5257 or go to "<https://newaccount.utep.edu/>".
2. Mandatory file formats: all text attachments you upload to assignments, discussion postings, or email messages must be MS Word documents (.doc or .docx); all images should be in JPEG Format (.jpg); if you send your work in a file, file's name should always include your name (last and first name).
3. The course requires frequent submissions of reflection papers written in specific formatting and styles. The general format used by papers in this course is APA. Please, become familiar with APA format. You can find lots of information about APA format at https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_style_introduction.html

4. **It is the responsibility of any student desiring to drop the course to turn in all the necessary drop forms. The instructor will not drop students who are no longer attending the class.**
5. **The instructor reserves the right to drop the students who have not adequately participated**

during one week of class (and did not notify the professor that they will be submitting late work for the corresponding week).

6. The instructor can drop any student at any time if a student violates the written rules/requirements for remaining in good standing in the course. If you are submitting the late assignment, please, see the section below about special requirements regarding late submissions.

Deadline and Assignments Policy

All online assignments are due by 11:45 PM (MST) on the assigned day (see the Calendar, and BlackBoard). For all the students the grades and feedback will be provided every week. This feedback will be emailed to you on Blackboard.

Please ensure that you carefully read all instructions for each assignment, particularly the due dates and times. Reading instructions is your responsibility and you should not assume due dates or times.

Keep electronic copies of all work submitted.

Professional courtesy and a positive, collaborative attitude are required in all aspects of this course. I invite open, honest communication. However, all communication must be on a professional level, not personal.

You are expected to produce quality work in this course. Spelling, grammatical errors, structure, and presentation will influence your final grade and each grade on any project. **You are required to check ALL your submissions via free online Grammarly.com (we will check all your submissions, and points will be subtracted if you did not use Grammarly.com).**

The rule of thumb for time planning for a course is approximately 3 hours for every credit hour taken. This is a standard figure recommended across the board by American universities. Since this class is 7 weeks class, you should expect to spend 6 hours of class time + 12 hours of study and prep time = **18 hours per week**.

Bear in mind that there will be many weeks where you will not need even half of that time, but there will be weeks where you will need the full quota of time. So, plan ahead and get caught up on readings in advance in the slow weeks.

What should you expect from me as the instructor?

I will provide you with clear instructions on class expectations.

I will check my e-mail every day during the first week of classes and will answer back to you as soon as possible. During the rest of the semester, I will check my e-mail at least five times a week.

If it is possible and within reason, I will return phone calls related to class activities promptly.

I will provide feedback on your performance.

I will leave myself open to suggestions about improvement of the class and class-related activities.

I will do all I can to ensure your learning and success in this class.

If any changes in the course are to be implemented, I will ensure that the class is notified promptly.

For Technical Assistance: For technical problems with our online course site or related computer/Internet applications, please contact the UTEP Helpdesk: M - F: 7 AM – 8 PM, Sat: 9 AM – 1 PM. On campus phone: 915.747.5257. Off campus: 915.747.4357. If you are on campus, you may also visit the ATLAS lab located within the Undergraduate Learning Center (UGLC building) or the Technology Support Center in Room 300, Library.

HB 2504 Requirements 2 and 3. Learning objectives and a general description of the subject matter of each lecture or discussion:

Student Learning Objectives/Outcomes

The course’s learning outcomes will require the student to acquire throughout the semester new knowledge and skills and build upon them.

The following table provides a list of the most relevant student learning outcomes for the course.

Table 1. Student learning outcomes and assessment

COURSE SPECIFIC STANDARDS ECE5354 students will be able to:	Measurements (means of assessment for student learning outcomes listed in first column)
1. Compare and contrast empirical research and related theoretical perspectives of child development as they related to Inquiry-based pedagogy and early learning in the STEM domains	Taking a Deeper Look
2. Analyze the critical impact of both the physical environment and socio-cultural interactions/relationships on young children’s early STEM conceptual development	Class Participation; Discussions. Taking a Deeper Look
3. Outline STEM process skills/practices and the impact they have on early problem solving and critical thinking across academic subjects	Discussions; Taking a Deeper Look
4. Critically examine various instructional techniques and materials aimed at addressing differentiated student needs, strengths, and interests in the STEM domains	Class Participation; Discussions; Taking a Deeper Look
5. Apply Inquiry-based learning experiences to enhance STEM domain competencies in young children	EC STEM Teaching Portfolio
6. Design developmentally appropriate STEM curricula for culturally and linguistically diverse learners	EC STEM Teaching Portfolio

UTEP Learning Resources:

UTEP provides a variety of student services and support, including the resources below.

- UTEP Library: You can access to a wide range of resources, including online, full-text access to thousands of journals and eBooks plus reference service and librarian assistance for enrolled students.
- The University Writing Center (UWC): Virtually everyone needs help with writing academic English. There's no shame in it. The UWC [Library Building, Rm.227; phone: 915.747.5112] provides online consultations to all UTEP students at no cost. They also have walk-in services, if you are local. It is a terrific resource. If I suggest you attend the Writing Center, it's because I think you will benefit from it.

Check the website for more information: <http://uwc.utep.edu>

Standards of academic integrity:

It is expected that work you submit will represent your own effort (or your own group's effort if it is a group project), will not involve copying from or accessing unauthorized resources or people (e.g., from a previous year's class), and will appropriately acknowledge allowable references that you do consult. 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 [making plans to cheat with another], 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 an 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.

Students with Disabilities statement:

If you have or believe you have a disability, you may wish to self-identify. You can do so by providing documentation to the Center for Accommodations and Support Services (CASS) located in Union E Room 106. Students who have been designated as having a disability must reactivate their standing with CASS 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 that may affect your ability to exit 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 CASS. You may call 915-747-5148 for general information about the Americans with Disabilities Act (ADA).

Student Conduct and Discipline: All students are expected and required to obey the law and to comply with Regent, Rules, and Regulations (<http://www.utsystem.edu/bor/rules>) with system and University rules, with directives issued by an administrative official in the course of his or

her authorized duties and to observe the standards of conduct appropriate for the university.

Equal Opportunity: All students regardless of gender, age, class, race, religion, physical disability, sexual orientation, etc., shall have equal opportunity without harassment in this course. Any problems with or questions related to this can be discussed confidentially with Dr. Kosheleva [email olgak@utep.edu to set up a phone or ZOOM meeting].

Guide to Online Etiquette:

As a member of the learning community of this class, the following is a list of specific expectations. (Note that this list is not exhaustive and that it may be added to as needed throughout the semester):

1. *You are expected to actively engage in the learning community of this class.*

This includes completing the coursework tasks as outlined in each week's session, actively contributing to discussions, seeking guidance if you have questions (note that if you have a question, it is likely that everyone will benefit if ask your question), and exhibiting professional courtesy during interactions with classmates/ your instructor. Class participation includes but is not limited to engaging in in-class activities and writing, volunteering inputs in class discussions, answering questions, defending personal viewpoints, and presenting completed assignments to your classmates.

2. *You are expected to exhibit appropriate behavior for a higher learning environment.*

Even though we will not meet face-to-face, logging on to our online course site is the equivalent of walking onto the UTEP campus. Therefore, the rules of conduct that apply on campus also apply to our course site. Our course site is a place to engage in social learning; it is meant to be a safe space for all. Our ideas and beliefs shape who we are and will differ from our peers; sharing these within class allows us to learn different perspectives and points of view, but this can only happen successfully if everyone in our learning community is respectful of individual ideas. You are encouraged to participate in all activities to the fullest extent possible, with an open mind to new experiences. In particular, the following are general guidelines for online interactions:

- All the information discussed between peers and/or with your instructor should be kept confidential, thus providing a safe atmosphere for creative expression, free of judgment.
- You are encouraged to participate to the depth that you feel comfortable sharing with the class (Note: An electronic record will remain, so be thoughtful in how much personal information you share. The general rule: share only that which you would be comfortable seeing printed in a newspaper/ public Internet page.).
- Do not use inappropriate language, all capital letters, or language short cuts (i.e., texting shorthand). Online entries should reflect academic writing standards, with edited spelling, grammar, and punctuation.
- When reacting to someone else's message, whether in agreement or disagreement, please address the ideas, not the person. (Note: Harassing, flaming, and/or inappropriate postings will not be tolerated.)
- Be sure to read everyone's responses before posting. Avoid repetition of what someone

else has already said. Add something new to the discussion!

- Please refrain from posting yes/no or I agree/disagree answers (this will NOT earn you participation points). The point of our online interactions is to create a rich and meaningful sharing of ideas; therefore, posts should: justify positions, provide specific examples, and demonstrate that you have read the required readings and your classmates' comments carefully and thoughtfully.

3. *You are expected to exhibit high-level time management skills and turn your work in ideally ON -TIME (some LATE work will be allowed, see LATE WORK guidelines below).*

We will email you your submissions' feedback every week (via BlackBoard email) if you submit your assignments on time. In case of LATE work, please, expect to receive your grade for that week only at the end of the class.

As previously mentioned, this is a fast-paced, intensive course that requires you to devote significant time to complete the required readings, discussions, and various additional assignments that are due each week. Although there is no mandatory time that you must be online, the research shows that those with the best success in online courses create a set schedule for coursework and stick to it (whether you do your work at 3 am or 10 am on whatever day does not matter, what matters is just that you allow a sufficient, set time each week of the semester to focus on coursework). Timely completion of all coursework is essential for this class to run smoothly (i.e., your classmates rely on you to do your readings early in the week and contribute to the discussion on time for them to be able to post feedback later in the week). All online assignments are due by the due date and time listed in the task directions (see each weekly session on our course site for specific details). Please ensure that you carefully read all instructions for each assignment, particularly the due dates and times, and then schedule the time you devote to this class accordingly.

LATE WORK guidelines:

A late penalty of 10% for each week will be applied for work turned in late.

However, you are strongly encouraged to do EXTRA CREDIT work for any assignment submitted late.

Important: (1) when you have not submitted part of your work (for example, Task1 or Task 2, etc.) you should immediately email me and TAs via BlackBoard email(subject late work, Last Name, First Name). In this email please, explain which part of the assignment you are planning to submit late;

(2) when you will submit your assignment, you should immediately email me and TAs via BlackBoard email(subject late work, Last Name, First Name). In this email please, tell us which part of the assignment you submitted late, and as EXTRA CREDIT attach the articles related to the topic of the assignment that you found using UTEP Electronic Databases. You need to email actual article attached to the email; in the body of the email, you should provide a reflection on the article (at least 100 words) .

In case of LATE work, please, expect to receive your grade only at the end of the class.

If Blackboard is down and you cannot get into our course site to post work by the required due date: ALL coursework should be posted on our online course site. If you find that you are unable to log into Blackboard to access our course site at the time that you are trying to post your work

by the due date, you must email me (through regular e-mail at olgak@utep.edu) IMMEDIATELY WITH AN ATTACHMENT OF YOUR WORK. When you do this, I will know that you have completed the work in a timely manner and it will be accepted, even though it was not posted on our course site as is generally required.

You will need to also email a description of your problem to helpdesk@utep.edu (cc me).

After I receive the case number assigned to you, I will then check with the Technology staff at UTEP to determine when Blackboard was out.

If you email me indicating that you did not post your coursework because Blackboard is down, but you do not send me your work as an attachment in the message, you will not receive credit for your work.

4. *Your work is expected to be your own.*

Everything you turn in for this course must be your own work. The purpose of coursework is to know what *you* think, not how clever you are at getting around the rules.... so use your brilliance in a productive way. Any student caught engaging in instances of cheating, plagiarism or any other form of academic misconduct WILL be referred to the Dean of Students Office for disciplinary action.

5. *You are expected to contact me for help if needed throughout the semester.*

My office hours for this summer are by appointment. Please email me to set up a day/time for a phone or Zoom meeting.

Please include your first and last name and the title of the course you are taking with me in the body of your message. You can expect a response from me with 24 hours (usually sooner) for any email communication you send.

If at any time, you have difficulty understanding my expectations or the course material or completing course work for any reason—BE PROACTIVE!!! I am here for you (email, phone, Zoom). I *strongly* encourage you to reach out to me as soon as possible (do not wait until the day before something is due or the end of the semester) and we will work together to make this class a success for you!

6. *All your submissions should be checked with Grammarly.com*

You are required to check ALL your submissions via free online Grammarly.com (we will check all your submissions, and points will be subtracted if you did not use Grammarly.com).

Evaluation & Coursework Requirements of Students:

Coursework Requirements

Participation	150 Points
Weekly Discussion	300 Points
Taking a Deeper Look Reflections	300 Points
EC STEM Teaching Portfolio	250 Points_____

Total	1000 Points_____

How Grades are Determined

Grade	Earned Points
A	900 -1000
B	800- 890
C	700- 790
D	600- 690
F	Below 600

General Criteria for Grading Assignments:

Does not meet expectations (Loss of many points)	Meets expectations (Loss of few points)	Exceeds expectations (Loss of no points)
<p>The information provided is not organized and detailed or conclusions drawn from the information are not supported or accurate. The assignment is incomplete/does not include all required sections according to the directions. All written portions include repeated grammatical and spelling errors; no or improper citations.</p>	<p>The information provided is somewhat organized and detailed and conclusions drawn from the information are somewhat supported and accurate. The assignment is mostly complete/ includes most required sections according to the directions. All written portions include few or no grammatical and spelling errors; proper citations with few errors.</p>	<p>The information provided is organized and detailed and conclusions drawn from the information are supported and accurate. The assignment is complete/includes all required sections according to the directions. All written portions include no grammatical and spelling errors; proper citations with no errors.</p>

Individual grading rubrics are found in the directions for each coursework task, which are on our online course site.

This course runs on a weekly schedule, Monday through Sunday. Detailed instructions for all the coursework tasks to be completed each week of the semester are arranged by class session (i.e., each class session covers one week of the semester). The class sessions for each week are labeled by week number and start date in the main left-hand navigation in our course site. In each of the weekly class sessions, you will find: the topic(s) and objectives for the week, the required reading (with embedded links to download/access articles), a summary of what tasks are due (and when) that week, and detailed directions and related links for completing and posting your coursework that is due for that class session (i.e., during that week).

The following is a summary overview of the required coursework for the entire semester and related points possible. For *detailed instructions*, you should access the weekly class sessions in our online course site in Blackboard.

Participation (150 points total)

Since we do not actually meet in person, participation in this course occurs through online postings and interactions in our course site. Your active participation in this course will be measured three ways, by your: (1) one-time self-introduction; (2) multiple feedback to various classmate postings throughout the semester, and (3) one-time feedback to classmates' self-introduction and EC STEM Teaching Portfolios.

- *One-time Self-Introduction* (20 points): At the beginning of the course, you will post a Self-introduction to introduce yourself to all of us (this introduction should be at least **300 words**; detailed instructions for this assignment are found in our courses site, Week #1).
- *Multiple Feedback to Classmates' postings* (100 points total through two types of response tasks, repeated throughout the semester)

For the weeks that required "Feedback to Classmates' Postings" are assigned (see detailed directions outlined in the individual weekly class sessions in our online course site), you will offer:

- Feedback to TWO classmates' Discussion Postings: (5 points for EACH feedback x 2 responses = 10 points per class session x 5 class sessions= 50 points total)
- Feedback to TWO classmates' Taking a Deeper Look Reflections: (5 points for EACH feedback x 2 responses = 10 points per class session x 5 class sessions= 50 points total)

To receive full credit, you will need to post ALL feedback to classmates' (TWO for Discussion postings and TWO for Taking a Deeper Look reflections) by 11:45pm MT on Sunday for each class session week they are assigned. Please write at least **50 words** for each feedback posting (regardless of type). Note: you DO NOT have to give feedback to the same student for each type of response (Discussion and Taking a Deeper Look reflection) in any given class session. DO NOT provide feedback to the same classmate every week. Instead, you should always try to respond to a classmate who does not already have feedback and/or who you have not provided feedback before.

- *One-time feedback to classmates' Self-Introduction/EC STEM Teaching Portfolio* (30 points total)
 - Feedback to a classmate's Self-introduction: you will respond to ONE classmate [minimum of **50 words**] by 11:45pm MT on Sunday of the week they are assigned. (10 points)
 - Feedback to classmates' EC STEM Portfolio: You will respond to TWO classmates [minimum of **75 words each**] by 11:45pm MT on Sunday of the week they are due. (10 points for each feedback x 2 responses= 20 points total)

Weekly Discussion (300 Points total)

Each week, there will be assigned readings/videos to watch related to our EC STEM discussion topic, along with four related questions for you to think about and share your thoughts. You should respond to ALL questions in your discussion posting. The total length of your responses should be at least **500 words** (you will include the total word count at the end; the number of words for each answer does not have to be equal). Your responses to Weekly Discussion Questions are due by **11:45 pm on Wednesday** of the weeks they are assigned. It is important to keep your answers/comments relevant to the topic of the discussion that week. (12.5 points x 4 questions = 50 points per discussion x 6 weekly discussions = 300 points total)

Taking a Deeper Look Reflections (300 points total)

Throughout the course, we will be taking a deeper look at specific aspects of EC STEM and related application to teaching practice. Each week, you will have assigned readings and sometimes a hands-on activity to complete related to the deeper look topic. You will then compose a reflection that shares your thoughts and insights related to your deeper look exploration. Taking a Deeper Look Reflections should be at least **400 words** total (you will include the word count at the end). For all Taking a Deeper Look tasks that include hands-on activities, you are additionally required to include pictures of your hands-on work in your reflection posting. Taking a Deeper Look Reflections are due by **11:45pm MT on Friday** of the weeks that they are assigned. [50 points x 6 reflections = 300 points total]

EC STEM Teaching Portfolio (250 Points total)

Your final project is the creation of an EC STEM Teaching portfolio. It is meant to both showcase the knowledge you have gained over the semester and to serve as a future resource. Your portfolio will consist of the five sections:

Section A: Introduction

Section B: Teacher Resources Section

C: Infants STEM Section D: Toddlers

STEM

Section E: 1st-3rd graders STEM

A breakdown of each section and detailed directions of what your final portfolio project should include is found in the Week 7 session of our online course site. Your EC STEM Teaching Portfolio is due by **11:45pm MT on Friday, August 20th**.

Note: Although Week 7 is reserved for you to work on your EC STEM Teaching Portfolio, the scope of this assignment is such that you should begin thinking about and working on it by no later than week 3 or 4 of this course.

Class Schedule: Please note that the schedule below is subject to change.

Week	DATES	TOPICS	COURSEWORK DUE
1	Jan 18 thru 22	Introduction to, and issues in EC STEM	<p>Self-introduction -(due @ 11:45pm MT, Wed) Discussion #1-(due @ 11:45pm MT, Thursday) Taking a Deeper Look Reflection #1 - (due @ 11:45pm MT, Fri)</p> <p>All feedback to classmate postings for week #1 - (due @ 11:45pm MT, Sun)</p> <p>Download ALL E-books provided in Optional Readings.</p> <p>You are required to use these resources in your submissions for Week 1- Week 7.</p>
2	Jan 23 thru 29	Grounding EC STEM in Developmental Theory and Practice	<p>Discussion #2-(due @ 11:45pm MT, Wed) Taking a Deeper Look Reflection #2 - (due @ 11:45pm MT, Fri)</p> <p>All feedback to classmate postings for week #2 - (due @ 11:45pm MT, Sun)</p>
3	Jan 30 thru Feb 5	EC Science & EC STEM for Infants/Toddlers	<p>Discussion #3-(due @ 11:45pm MT, Wed) Taking a Deeper Look Reflection #3 - (due @ 11:45pm MT, Fri)</p> <p>[There is no feedback to classmates due this week.]</p>
4	Feb 6 thru 12	EC Technology and EC Engineering & EC STEM for Preschoolers/Kindergartners	<p>Discussion #4-(due @ 11:45pm MT, Wed) Taking a Deeper Look Reflection #4 - (due @ 11:45pm MT, Fri)</p> <p>All feedback to classmate postings for week #4 - (due @ 11:45pm MT, Sun)</p>
5	Feb 13 thru 19	EC Mathematics & EC STEM for 1 st -3 rd graders	<p>Discussion #5-(due @ 11:45pm MT, Wed) Taking a Deeper Look Reflection #5 - (due @ 11:45pm MT, Fri)</p> <p>All feedback to classmate postings for week #5- (due @ 11:45pm MT, Sun)</p>
6	Feb 20 thru 26	Integrated Curriculum and expanding conceptions of EC STEM	<p>Discussion #6-(due @ 11:45pm MT, Wed) Taking a Deeper Look Reflection #6 - (due @ 11:45pm MT, Fri)</p> <p>All feedback to classmate postings for week #6 - (due @ 11:45pm MT, Sun)</p>
7	Feb 27 thru March 5	Final Project	<p>EC STEM Teaching Portfolio - (due @ 11:45pm, Fri) All feedback to classmate portfolios (due @ 11:45pm MT, Sun)</p>