



Syllabus Summer 2018

Course Title: Culturally Relevant Pedagogy in the STEM Classroom

Course Prefix Number: SCED 546

Credit Hours: 3 Semester Hours

Pre-requisites / Co-requisites: Admission to Graduate Study in Teacher Education

Catalog Description:

There is a tremendous need to increase the numbers of underrepresented youth who pursue higher education and jobs in STEM fields. The value and strength of diversity has become increasingly described in educational literature. Building on the scholarly work of Geneva Gay, Gloria Ladson-Billings, Ana Maria Villegas, Felicia Moore-Mensah and many others, teachers in this course will explore how culturally relevant practices can provide more equitable opportunities for diverse learners in all classrooms.

This course seeks to introduce teachers to the curriculum and pedagogy issues relevant to race, language, genre and socio-economic class difference, and to apply content and pedagogy in contexts involving science and mathematics contexts for effective learning.

Curricular Relationships:

This course is an elective course for candidates earning their M. A. in Education and/or Graduate Certificate in STEM Education

Relevant Program or Gen Ed Goals

Program Goal #1. To produce initial licensure candidates, graduate endorsees and Masters Candidates who have met or exceeded the quality standards for teachers and principals as established by the appropriate governing bodies of the state of Colorado.

Program Goal #2. To produce educators who exemplify the core dispositions of effective educators and leaders including, but not limited to empathy, professional competence, and the ability to work with learners who have special needs and are culturally and linguistically diverse.

Program Goal #3. To produce educators who can incorporate evolving professional standards, applicable public policies, and academic research to enhance their own practice and serve as a role model to colleagues.

Student Learning Outcomes:

<i>Student Learning Outcomes</i>	<i>Relevant Progra</i>	<i>Assessment Measures</i>
Evaluate their own identities, biases and position in the curricula and schooling experience.	2, 3	Measured by Assignment: Equity Assessment Evaluation
Design a multicultural STEM mini unit and equitable assessment.	1, 2, 3	Measured by Assignment: Culturally Relevant STEM Mini Unit and Assessment
Review and discuss literature related to relevant teaching and learning practices.	1, 2, 3	Measured by Assignment: Live Sessions – Engaged Attendance and Weekly Discussions
Collect and analyze data pertaining to student diversity.	2, 3	Measured by Assignment: Class Cultural Representation for STEM and Cultural Analysis and Implications and Unit Reflection
Present findings in a research report and oral presentation.	2, 3	Measured by Assignment: Presentation of Unit Plan and Outcome
Relate findings to national priorities for STEM education.	2, 3	Measured by Assignment: Live Sessions – Engaged Attendance and Weekly Discussions

Content Outline:

Module 1: Equity Assessment

Meeting the needs of diverse learners includes assessing learners through a multicultural lens. Often assessments are written by individuals who do not know the students in a specific classroom and their valuable cultural connections to content. Teachers take a critical look at the assessments they use and consider them with a culturally responsive lens with the goal of making assessments more equitable.

SLO:

- Evaluate their own identities, biases and position in the curricula and schooling experience.

- Design a multicultural STEM mini unit and equitable assessment.

Guiding Questions:

- In what ways do our own biases affect our teaching practice?
- How can we address these biases to promote positive change?
- How can our lessons be designed in a way that is equitable for all students?

Artifacts: Equity Assessment Evaluation, Weekly Discussions

Module 2: Cultural Representation for STEM

Culturally Responsive instruction requires that teachers invite meaningful connections that students and teachers collectively derive and cultivate in the classroom. To do so, teachers need to think deeply about how students lives beyond the classroom connect to standards-based content.

SLO:

- Review and discuss literature related to relevant teaching and learning practices.
- Collect and analyze data pertaining to student diversity.

Guiding Questions:

- How can instruction be tailored to the multicultural representation in a classroom?
- How do student backgrounds affect how a student participates in an experience?
- How can STEM instruction enhance the multicultural representations in a classroom?

Artifacts: Cultural Representation for STEM, Cultural Analysis and Implications, Unit Reflection, Weekly Discussions

Module 3: Science for All and reform-based teaching

The national Next Generation Science Standards were written for all students, placing value on equitable learning opportunities for the nations diverse student population. Likewise, the ASU program aims to prepare teachers who “exemplify....empathy, professional competence, and the ability to work with learners who have special needs and are culturally and linguistically diverse.” A close look at how to enact this philosophy is important if it will be realized in classroom.

SLO:

- Design a multicultural STEM mini unit and equitable assessment.
- Present findings in a research report and oral presentation.

Guiding Questions:

- How do the NGSS work towards providing quality learning experience for all students?
- In what ways can STEM be used to address the needs of students with special needs?
- Why is it important to include reform-based teaching in a classroom?

Artifact: Weekly Discussions; Culturally Relevant STEM Mini Unit & Assessment

Module 4: Integrating Culture in the STEM Classroom

Teachers need to be able to practice strategies for enact culturally responsive teaching and reflect on what this looks like in their classroom and other classrooms. Through peer discussions and time to engage in reflective practice in this course, teachers will enhance their ability to integrate culture at a meaningful level.

SLO:

- Review and discuss literature related to relevant teaching and learning practices.
- Collect and analyze data pertaining to student diversity.

Guiding Questions:

- Why is culturally responsive teaching important?
- What does it look like to teach in a culturally responsive way?
- How can culture be integrated into the STEM classroom?

Artifacts: Weekly Discussions; Cultural Analysis and Implications; Culturally Relevant STEM Mini Unit & Assessment

Course Procedures/Policies:

Online Learning Policies

Discussion Posting: Students are expected to post a minimum of two times for each mandatory discussion post. Each weekly lesson contains one or more reading and an associated discussion. Initial responses to each discussion post are due by 11:59pm (eastern time) on the day prior to the live session meeting day. For example, if the course meets live on Tuesday's then discussion posts are due on Monday at 11:59pm eastern. Your comments must be thoughtful and advance the discussion. Do not wait until the last day to participate in the discussion. Five points will be deducted for late posts.

Student Online Engagement: Online coursework requires at least the same amount of involvement as a face-to-face class. You are expected to be prepared for "class" by completing readings, viewing online resources, responding to discussion topics, reflecting on your (and others') experiences or doing anything else assigned by the instructor. This includes participating in any synchronous activities that have been scheduled in advance (e.g., chats) as well as consistent engagement with asynchronous activities such as discussion postings. In a traditional setting, 3 credit hours equal 45 hours of "seat time" plus outside preparation and work. In a 15-week semester you should plan on at least three hours per week of work on Blackboard, in addition to whatever other preparation is required for the corresponding module.

Academic Dishonesty

Cheating, plagiarism, or forgery in any academic matter violates the ASU policy, departmental policy, and the trust of your fellow students. All written work must be your own and should reflect your own intellectual activity. All legitimate citation to 'borrowing' of materials or ideas from other sources or persons must be properly and clearly credited to the source using APA format. The intentional submission



of other's works, words or ideas will automatically subject you to failure on the assignment in question and will likely be cause for your failure in the course.

Non-discrimination policy. Adams State University, in accordance with applicable Federal and State law and University policy, does not discriminate on the basis of race, color, national origin, religion, gender, disability, age, medical condition, or sexual orientation. Inappropriate or discriminatory behaviors or comments are counterproductive to the academic process, so it is expected that students in this course will behave in a manner respectful of their classmates, regardless of actual or perceived differences.

Academic freedom is a cornerstone of the University. Within the scope and content of the course as defined by the instructor, it includes the freedom to discuss relevant matters in the classroom. Along with this freedom comes responsibility. Students are encouraged to develop the capacity for critical judgment and to engage in a sustained and independent search for truth. Students are free to take reasoned exception to the views offered in any course of study and to reserve judgment about matters of opinion, but they are responsible for learning the content of any course of study for which they are enrolled.

Student Sexual Misconduct Policy. Title IX prohibits sex discrimination to include sexual misconduct: harassment, domestic and dating violence, sexual assault, and stalking. If you or someone you know has been harassed or assaulted, you can receive confidential support and academic advocacy at the Adams State University Counseling Center at Confidential support and academic advocacy can be found at the Adams State University Counseling Center located in Richardson Hall 3100 or may be contacted at 719-587-7746. You may also fill out an anonymous "concern form" at <https://www.adams.edu/students/ccc/>. Crisis support can be found in the San Luis Valley community 24/7 at San Luis Valley Comprehensive Mental Health Center: 719-589-3671 or Tu Casa: 719-589-2465. Tu Casa offers services for victims of sexual assault and domestic violence. Alleged violations can be reported to the Adams State University Title IX Office, Director Ana Guevara, at 719-587-8213 or at anaguevara@adams.edu. The ASU Title IX Office is located in the Student Union Building (SUB) room 327. Reports to law enforcement can be made to Adams State University Police Department at #1 Petteys Hall or contacted at 719-587-7901, 911, or 24-hour dispatch at 24-hour dispatch: 719-589-5807 (State Patrol).

Confidentiality and Mandatory Reporting As an instructor, one of my responsibilities is to help create a safe learning environment on our campus. I also have a mandatory reporting responsibility related to my role as a responsible employee as designated by Title IX. I am required to share information regarding sexual misconduct or information about a crime that may have occurred on Adams State University Campus. Students may speak to someone confidentially by contacting Adams State University Counseling Center at the Adams State University Counseling Center located in Richardson Hall 3100 or contacted at 719-587-7746. You may also fill out an anonymous "concern form" at <https://www.adams.edu/students/ccc/>. Crisis support can be found in the San Luis Valley community 24/7 at San Luis Valley Comprehensive Mental Health Center: 719-589-3671 or Tu Casa: 719-589-2465. Tu Casa offers services for victims of sexual assault and domestic violence. Alleged violations can be reported to the Adams State University Title IX Office, Director Ana Guevara, at 719-587-8213 or at anaguevara@adams.edu. The ASU Title IX Office is located in the Student Union Building (SUB) room 327. Reports to law enforcement can be made to Adams State University Police Department at #1 Petteys Hall or contacted at 719-587-7901, 911, or 24-hour dispatch at 24-hour dispatch: 719-589-5807 (State Patrol).

Course Outline and Assignments

Date DUE:	Topic	Assignments due by 11:59 PM EST on the date due:
Week 1	<p>Live Session 1 (5/16): Introduction to Multicultural STEM Education and Teaching STEM for Social Justice Session Date: 5/16</p> <p><i>Module 4: Integrating Culture in the STEM Classroom</i></p>	<p>Introduction to the course objectives and multicultural STEM Education through a social justice lens.</p>
Week 2	<p>Multicultural STEM Education and Teaching STEM for Social Justice</p> <p><i>Module 4: Integrating Culture in the STEM Classroom</i></p>	<p>Introductory Post: Complete the introductory post and write a brief reflection regarding Session 1.</p> <p>Due: 5/27</p>
Week 3	<p>Live Session 2 (5/30): STEM Culture and Code Switching</p> <p><i>Module 4: Integrating Culture in the STEM Classroom</i></p>	<p>Extra Credit Post: What is the culture of STEM like and how does it influence our teaching? Students learn to code switch or cross cultural boarder in order to succeed in science.</p> <ul style="list-style-type: none"> • Kusimo et al. (2000). • Lee (n.d.) <p>Due: June 3</p>
Week 4	<p>Multicultural STEM Education in YOUR Classroom</p>	<p>POST 1: Complete the readings below and respond to the discussion questions in</p> <ul style="list-style-type: none"> <input type="checkbox"/> Miller, A.T. (2005) <input type="checkbox"/> (Gonzalez & Kuenzi (2012) pg. 23-27

	<i>Module 4: Integrating Culture in the STEM Classroom</i>	Assignment 1: Self Reflection Due: June 10
Week 5	Live Session 3 (6/13): Assessment Equity <i>Module 1: Equity Assessment</i>	Discussing the importance of an equitable assessment. Assignment 2: Cultural Analysis Plan Due: June 17
Week 6	The Culture of STEM <i>Module 2: Cultural Representation for STEM</i>	POST 2: Complete the readings below and respond to the discussion questions <ul style="list-style-type: none"> • Aikenhead (1996) • Aikenhead (1999) Due: June 24
Week 7	Live Session 4 (6/27): Cultural Relevance and Gender Equity in STEM Education <i>Module 3: Science for All and reform-based teaching</i>	Inclusive STEM teaching for students of diverse backgrounds. Assignment 3: Lesson Plan Due: July 1
Week 8	Strategies for a Culturally Relevant Classroom	POST 3: Complete the readings below and respond to the discussion questions <ul style="list-style-type: none"> • Ladson-Billings (1995) □ Lee (2011)

	<i>Module 2: Cultural Representation for STEM</i>	Due: July 8
Week 9	Equity in Assessment <i>Module 3: Science for All and reform-based teaching</i>	OFFICE HOURS Assignment 4: Assessment Evaluation Due: July 15
Week 10	Session 5 (7/18): Final Presentations	Presentation of Lesson Plan – sharing findings (please upload your slides to dropbox by 7/17) Assignment 5: Presentation Due: 7/17**
Week 11	Gender Equity <i>Module 2: Cultural Representation for STEM</i>	POST 4: Complete the readings below and respond to the discussion questions <ul style="list-style-type: none"> • Sammet & Kekelis (2016) • Dentith (2008) Due: 7/22
Week 12	Course Wrap Up	Assignment 6: Course Reflections Due: 7/29

** Please note that all the due dates for discussions and assignments are on Sunday expect for the presentation. It has a Tuesday due date so as to allow time to upload presentations.

1. Live Sessions – Engaged Attendance (10 points)

Participants must attend and actively participate in all live sessions and online discussions. Weekly assignments will be posted in the online learning space and must be completed prior to arrival in class or posting to the discussion board.

2. Weekly Discussion Assignment (20 points)

An important component of any graduate course is the discourse between participants. Please contribute meaningfully to discussions by drawing on assigned readings and your personal experiences as a teacher, learner, and citizen. Respond to the posts of at least two of your fellow learners for each discussion question—unless the discussion instructions state otherwise.

Responses to other course participants should contribute to the conversation by asking

questions, respectfully debating positions, and presenting supporting information relevant to the topic.

Please pay careful attention to the rubric that will be used to assess your level of meaningful engagement in discussions.

3. Assignment 1: Self Reflection Paper (June 10)

A first step in successfully implementing culturally relevant pedagogy in the STEM classroom is to first reflect on your own identity and your identity as a STEM learner. This paper will be made up of three major parts. The first part of your paper should describe the memories and thoughts about how you came to see yourself as a cultural being. The second part of the paper should be focused on describing your identity and story as learner of one of the STEM disciplines (Science, Technology, Engineering, and Math). The final section (and shortest) will be a quick assessment of how you currently use culture in your teaching. Some guiding questions are listed below.

Minimum of 3-4 pages

Part 1: Identity Reflection

- What are some aspects of your identity and/or culture?
- Using your own experiences, thoughts, reflections, and memories, how have you come to understand your own identity/culture?
- What are some factors, people, or experiences that have helped to shape your identity/culture?
- How has your understanding of your identity/culture change over time?
- How might my experiences impact me as an educator?

Part 2: STEM Learning History

- Select one of the STEM disciplines and describe your earliest memory you have learning something in that discipline.
- What was that experience like? What made it memorable?
- Reflect on your experiences as a STEM learner (K-12 and college). What was challenging? What were positive learning experiences and why were they positive?
- How did your learning experiences and teachers shape your perception of this discipline?
- ** How are these experiences reflected in the way I teach?

Part 3: Role of culture in teaching

- Describe the current ways you include your culture and students' culture in your classroom.
- To what extent do you believe culture to play a role in teaching and learning of STEM?

4. Assignment 2: Cultural Analysis Plan

After understanding one's own identity and culture, a second step to achieving a culturally relevant classroom is to get to know your students as cultural beings. In this assignment you will develop a plan that will address the question, "How can I better understand my students' cultures?" In this plan you may want to consider ways in which you can deepen your own understanding of the cultures and identities of your students. Some guiding questions for this assignment are listed below. *Minimum 1-2 pages*

- How can you better understand who is sitting your classroom?
- Once you get a better sense of the cultures in your classroom, how will you deepen you



understanding of these cultures?

- What are some actions you can take to better understand who your students are?

5. Assignment 3: Culturally Relevant STEM Lesson (s) & Assessment

Using the feedback from the class and research from readings, *revise* a lesson you have taught in the past to make it more culturally relevant to the needs of your students. Consider using NASA assets including visualizations, illustrations, animations, and pedagogy including engineering (optional). The Lesson should include:

- **Lesson(s) Rationale:** Describe the overall essential question for the lesson and summarize your lesson's goals. *Half page*
- **Background information:** Include your student demographics and cultural backgrounds. *One page*
- **Highlighted multicultural components:** Describe where in your lesson you included components that focus on the cultural needs of your students. *one page*
- **Technology component-** a description of how you would include technology) *half page*
- **Lesson Plan:** Using the [5-E model](#), write the lesson plan *page length may vary*
- **Assessment-** Quiz, test or project *minimum 10 questions*

6. Assignment: 4: Equity Assessment Evaluation

Equitable STEM education is not only necessary in the lesson design and implementation but also in the assessments. An integral part to ensuring STEM instruction meets the needs of diverse learners, teachers must also create assessments through a multicultural lens. Find an assessment you've used in the past. After reviewing the assessment, describe how you could aim to make it more equitable. Please submit a reflective summary of the assessment and what changes you would make. Please also include a copy of the revised assessment. *1-2 pages*

7. Assignment 5: Presentation of Lesson Plan and Outcome

You will offer a short presentation *during our last live class meeting* that outlines your lesson, *highlighting* the multicultural components.. The purpose of the presentation is to inform your colleagues about what methods you used to make your lesson meet the multicultural needs of your group of students, as well as describe their effectiveness during and after implementation. Presentation should include:

- Summary of the cultures your students represent
- Lesson overview
- Changes you've made to make the lesson more relevant
- Final reflections

8. Assignment 6: Course Reflection

Reflect the work of this course. How has your perception of culture and its place in the classroom shifted? What are some changes you will make to your practice to better support a culturally relevant teaching practice?

1-2 pages

Grade Distribution and Scale:

Assignment	Possible Points (110 total)
Live Session Engaged Attendance	10 points
Weekly Discussion	20 points
Self Reflection Paper	20 points
Cultural Analysis	10 points
Assessment Equity Evaluation	10 points
Culturally Relevant STEM lesson & Assessment	20 Points
Course Reflection	5 points
Presentation	5 Points

Final grades are determined by the total number of points earned in this course.

Grade A: 90 – 100 points
 B: 80 – 89 points
 Graduate Credit Minimum: 80 points (B-)

II. Required / Recommended Reading:

[Aikenhead, G. S. \(1996\). Science education: Border crossing into the subculture of science. *Studies in Science Education*, 27, 1-52.](#)

[Aikenhead, G.S. \(1999\). Cross-cultural science education: A cognitive explanation of a cultural phenomenon. *Journal of Research in Science Teaching*, 36\(3\), 260-287.](#)

[Dentith, A. \(2008\). Smart girls, hard-working girls but not yet self-assured girls: The limits of gender equity politics. *Canadian Journal of Education*, 31\(1\): 145-166.](#)

[Gonzlez, H. & Kuenzi, J. J. \(2012\). Science, technology, engineering and mathematics \(STEM\) Education: A primer. Congressional Research Service, 23-27.](#)

[Kusimo, P., Ritter, M.G., Busick, K., Ferguson, C., Trumbull, E., Solano-Flores, G. \(2000\). Making assessment work for everyone: How to build on student strengths. *SEDL*, 30-76.](#)

[Lee, O. Effective STEM education strategies for diverse and underserved student groups. *Successful STEM Education in K-12 Schools \(NRC\)*, Washington, DC \(May\)](#)

[Ladson-Billings, G. \(1995\). Toward a theory of culturally relevant pedagogy. *American Educational Research Journal*, 32\(3\), 465-491.](#)

[Miller, A.T. \(2005\) The multicultural lab: Diversity issues in STEM classrooms. In *Teaching Inclusively* Ouellett, M.L.451-459.](#)

[Mensah, F. M. \(2011\). A Case for Culturally Relevant Teaching in Science Education and Lessons Learned for Teacher Education. *Journal Of Negro Education*, 80\(3\), 296-309.](#)

[Sammet, K. &Kekelis, L. \(2016\) Changing the game for girls in STEM: Findings on high impact programs and systems-building strategies. *Techbridge*](#)

Statement Regarding Course Adaptations or Accommodations:

Adams State University complies with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act. Adams State University is committed to achieving equal educational opportunities, providing students with documented disabilities access to all university programs, services and activities. In order for this course to be equally accessible to all students, different accommodations or adjustments may need to be implemented. **The Office of Accessibility Services (OAS) is located in Richardson Hall 3-100, or available at OAS@adams.edu, and [719-587-7746](tel:719-587-7746).** They are your primary resource on campus to discuss the qualifying disability, help you develop an accessibility plan, and achieve success in your courses this semester. They may provide you with letters of accommodation, which can be delivered in two ways. You may give them to me in person, or have the Office of Accessibility Services email them. Please make an appointment with their office as early as possible this semester so that we can discuss how potential accommodations can be provided and carried out for this course. If you have already received letters of accommodation for this course from OAS, please provide me with that information privately so that we can review your accommodations together and discuss how best to help you achieve equal access in this course this semester.

Statement Regarding Academic Freedom & Responsibility

Academic Freedom and Responsibility: for courses that do not involve students in research: Academic freedom is a cornerstone of the University. Within the scope and content of the course as defined by the instructor, it includes the freedom to discuss relevant matters in the classroom. Along with this freedom comes responsibility. Students are encouraged to develop the capacity for critical judgment and to engage in a sustained and independent search for truth. Students are free to take reasoned exception to the views offered in any course of study and to reserve judgment about matters of opinion, but they are responsible for learning the content of any course of study for which they are enrolled

Cultural Analysis Plan

	1 Non- performanc	2 Basic	3 Proficient	4 Distinguished
Statement about Culturally Relevant Pedagogy in STEM	Not addressed.	Alludes to culturally relevant pedagogy.	Shares thoughts on the culture of students in teacher pedagogy.	Provides clear justification for students' cultural identify in planning and implementation of STEM lessons.
Student Data.	Does not collect relevant information.	Collects some data.	Collects data on the Identifies the cultural background of students.	Identifies the cultural background of students using a valuable data collection tool.
Writing convention.	Several errors that distract the reader from the content of the paper.	Grammatically correct, no type-o's or other errors; conforms to APA format.	N/A	N/A

Timeliness. Work that is submitted late is subject to 2 points per day reduction.

Your score = _____ / 10 points

Weekly Discussion Assignment Rubric

	1 Non- performer	2 Basic	3 Proficient	4 Distinguished
Applies relevant course concepts, theories, or materials correctly.	Does not explain relevant course concepts, theories, or	Explains relevant course concepts, theories, or materials.	Analyzes relevant course concepts, theories, or materials correctly, using some examples	Analyzes course concepts, theories, or materials correctly, using examples or supporting evidence from multiple
Collaborates with fellow learners, relating the discussion to relevant	Does not collaborate with fellow learners.	Collaborates with fellow learners without relating discussion to	Collaborates with fellow learners, relating the discussion to relevant course concepts.	Collaborates with fellow learners, relating the discussion to relevant course concepts and
Applies relevant professional, personal, or other real-world	Does not contribute professional, personal, or other	Contributes professional, personal, or other real-world experiences,	Applies relevant professional, personal, or other real-world experiences.	Applies relevant professional, personal, or other real-world experiences to extend the
Supports position with applicable knowledge.	Does not establish	Establishes relevant position.	Supports position with applicable knowledge from course readings	Supports and validates position with applicable knowledge from
Timeliness.	Two or more posts are greater than 5 days	Two or more posts are 3-5 days late.	Two or more posts are 1-2 days late.	Responses are consistently submitted on or before the due

Weekly discussions are worth 20 points total in the course. Your engagement in each mandatory discussion will be evaluated using this rubric. A mid-term and end of course score will be determined based on all posts to date. In all courses, you are expected to respond to mandatory prompts and engage in discussion with at least 2 other classmates.

Please use this rubric to understand the expectations and self-assess your engagement in discussions.

Equity Assessment Evaluation Rubric

	1 Non- performanc	2 Basic	3 Proficient	4 Distinguished
Equitable Assessment.	Equity is not addressed.	Identifies an assessment that is used in class; lacks thought on equity.	Shares thoughts on the equity of the assessment.	Provides a clear justification for why the assessment is or is not equitable.
Reflective summary	Does not reflect on changes.	Provides little evidence of how equity may inform change in assessment.	Provides evidence of how knowledge of equity will inform changes in the assessment.	Demonstrates a strong ability to be reflective and implement change based on new understanding.
Writing convention.	Several errors that distract the reader from the content of the paper.	Grammatically correct, no type-o's or other errors; conforms to APA format.	N/A	N/A

Timeliness. Work that is submitted late is subject to 2 points per day reduction.

Your score = _____ / 10 points

Presentation Rubric

	1 Basic	2 Proficient	3 Distinguished
Explanation of Ideas.	<ul style="list-style-type: none"> - uses too few, inappropriate, or irrelevant descriptions, facts, details, or examples to support ideas 	<ul style="list-style-type: none"> - uses some descriptions, facts, details, and examples that support ideas, but there may not be enough, or some 	<ul style="list-style-type: none"> - uses relevant, well- chosen descriptions, facts, details, and examples to support claims, findings,
Organization	<ul style="list-style-type: none"> - does not include important parts required in the presentation - does not have a main idea or presents ideas in an order that does not make sense - does not have an introduction and/or conclusion 	<ul style="list-style-type: none"> - includes almost everything required in the presentation - moves from one idea to the next, but main idea may not be clear or some ideas may be in the wrong order - has an introduction and conclusion, but they are not effective 	<ul style="list-style-type: none"> - includes everything required in the presentation - states main idea and moves from one idea to the next in a logical order, emphasizing main points in a focused, coherent manner - has an effective introduction
Voice.	<ul style="list-style-type: none"> - Speech is at times muddled, too quick or slow - speaks too softly to be understood 	<ul style="list-style-type: none"> - speaks clearly; not too quickly or slowly - speaks loudly enough for everyone to hear; changes tone to 	<ul style="list-style-type: none"> - N/A
Response to audience questions.	<ul style="list-style-type: none"> - does not address audience questions (goes off topic or misunderstands) 	<ul style="list-style-type: none"> - answers audience questions clearly and completely 	<ul style="list-style-type: none"> - N/A

Timeliness. Presentation must be submitted prior to the live session date. Attendance at the live session is required to present.

Score = _____ / 10

Divide score by 2 for total points = ____

Course Reflection Rubric

	1 Non-performance	2 Basic	3 Proficient
Overview	Does not describe the multicultural components course.	Describes the multicultural components of the course.	N/A
Reflection on course.	Reflection is lacking significant detail.	Provides detailed assessment of the course and shifts in thinking.	Provides detailed assessment with evidence of implications from the course's learnings and explains shifts to their practice.
Personal Reflection on Culturally Relevant Teaching	Analysis is lacking significant detail.	Provides an analysis of how the process of planning and implementing the lesson will influence practice in the future.	Provides an analysis with evidence of how the process of planning and implementing the lesson will influence practice in the future.
Writing convention	Several errors that distract the reader from the content of the paper.	Grammatically correct, no type-o's or other errors; conforms to APA format	N/A

Timeliness. Work that is submitted late is subject to 2 points per day reduction.

Score = _____ / 10

Divide score by 2 for total points_____.

Self Reflection Paper

	1 Non- performanc	2 Basic	3 Proficient	4 Distinguished
Part 1: Identity and Cultural Reflection	Reflection is lacking significant detail.	Provides details that respond to one of the guiding questions	Provides details that respond to some of the guiding questions.	Provides details that respond to most/all of the guiding questions.
Part 2: STEM Learning History	Reflection is lacking significant detail.	Provides details that respond to one of the guiding questions	Provides details that respond to some of the guiding questions.	Provides details that respond to most/all of the guiding questions.
Role of culture in teaching	Reflection is lacking in detail.	Provides a detailed description and explanation regarding their perception of the role of culture in	N/A	N/A
Writing convention.	Several errors that distract the reader from the content of the paper.	Grammatically correct, no type-o's or other errors; conforms to APA format.	N/A	N/A

Timeliness. Work that is submitted late is subject to 2 points per day reduction.

Your score = _____ / 20 points *Parts 1 and 2 scores will be multiplied by 2

Culturally Relevant STEM Lesson & Assessment Rubric

	0 Non-performance	1 Basic	2 Proficient	3 Distinguished
Lesson Rationale	Not included.	Essential questions are weak, not measurable or	States the measurable essential questions and	Describes the overall essential question for the lesson and the
Background information	Student demographics and cultural backgrounds are missing or lack	States student demographics and cultural background.	Includes student demographics and cultural backgrounds synthesized from previous data	Analyzes student demographics and cultural backgrounds synthesized from previous data
Highlighted multicultural components	The lesson does not address the culture of	The lesson briefly addresses culture of	Description of how the lesson considers the cultural identity	Synthesizing statement of how the lesson carefully considers the
Technology component	Technology is not addressed.	Technology is an “add- on”; not meaningful.	Technology is identified in the lesson.	Description of how technology is used in a meaningful
5E lessons	Lessons are not written in a	Conventions of 5E lesson planning are	Lessons are lacking details required.	Lessons include all components necessary to teach
Lesson Assessment	Does not include assessment.	Includes poorly written or inappropriately aligned	Includes assessment for content; may not appropriately measure	Includes assessment that is well-aligned to lesson and lesson objectives.
Writing convention.	Several errors that distract the reader from the content of the	N/A	Grammatically correct, no type-o’s or other errors; conforms to APA	N/A

Timeliness. Work that is submitted late is subject to 2 points per day reduction.

Your score = _____ / 20 points

