ANTIOCH UNIVERSITY SEATTLE
School of Education

Purpose of the School of Education: The School of Education promotes constructivist pedagogy, critical reflection and a commitment to social justice through transformative education and realized by positive impact on the learner's growth, in school and beyond.

Day & Time/Campus:	Tuesdays & Thursdays, 4:00 – 5:45 PM, Antioch Campus
Quarter/Year/Credits:	Spring 2017, Weeks 1-7, 3 credits
Instructor/Email:	Carolyn Colley, ccolley@antioch.edu
Office Hours:	Email to set up appointment. Happy to meet! ☺

Course Description
Teacher candidates experience practice-based framework for science teaching and learning. Learning experiences integrate the use of technology, highlight multicultural and sustainability issues present in science education, and apply current assessment practices. Students develop practice-based, multicultural lessons that are based on Next Generation Science and Washington State Environmental and Sustainability Standards, with emphasis placed on student learning, assessing student understanding, culturally responsive teaching, and reflective teaching practices.

Course Essential Questions
This course is guided by the following essential questions:
- How do students learn science? Why is it important to reach all learners in science?
- What teaching practices help students learn science in ways that help them revise their understanding over time? How can I facilitate learning as a process?
- How can I help *all* students make sense of science ideas through using school, local, and global community resources and lived experiences?

Course Learning Objectives
- Teacher candidates (TC) will learn how to effectively plan for, instruct, and assess K-8 standards-based science instructional plans that meet the needs of diverse learners.
- TCs will design lessons that elicit student understandings of a scientific big idea, provide sensemaking opportunities for students, and allow students to apply their understandings.
- Evidence of student learning gathered from multiple sources of assessment and used to modify instruction in-the-moment and for subsequent lessons.
- TCs will design, reflect upon, and modify science instruction that uses students' everyday lives as the basis of learning. Student, classroom, school and community context and students' assets will form and shape science instruction. Families and community connections will be an intricate part of lesson design and reflection. .
- TCs will design reflect upon, and modify K-8 science lessons that are differentiated for the needs of the classroom learners.
- TCs will practice and reflect on discourse strategies that foster productive learning.

Course Requirements
1. *Attendance*: Students are expected to attend all scheduled classes. Credits may be denied for failure to attend classes. (Antioch University Seattle Catalog)
2. *Incomplete policy*. The University expects students to complete all coursework by the end of the quarter. In exceptional circumstances, students may request an exception and negotiate with the instructor for an Incomplete (Inc).

3. *Participation* in class exercises and discussions.
4. *Course Evaluations*: Final course evaluation (Wk 7) is required for all students.

Required Course Texts

- Rosebery, A. S. & Warren B. (2008). *Teaching Science to English Language Learners: Building on Students' Strengths*. NSTA Press: Arlington, Virginia.
- Michaels, S., Shouse, A., & Schweingruber, H. (2008). *Ready, Set, Science! Putting Research to Work in K-8 Science Classrooms*. Washington, DC: The National Acad. Press. (Available for free at: http://www.nap.edu/openbook.php?record_id=11882)

Recommended Texts (not required, but useful!)

- Cartier, J.L., Smith, M.S., Stein, M.K., & Ross, D. K. (2013). *5 Practices for Orchestrating Productive Task-Based Discussions in Science*. The National Council of Teachers of Mathematics, Inc. Reston. VA: NSTA Press.
- Zembaul-Saul, C.L., McNeill, K.L., Hershberger, K. (2012) *What's Your Evidence? Engaging K-5 Children in Constructing Explanations in Science.* Pearson Professional Development. (Print copy includes CD-ROM with teaching examples)

Selected Websites to support science teaching and learning (there are many others!):

- Ambitious Science Teaching - http://AmbitiousScienceTeaching.org/
- National Science Teachers Association http://www.nsta.org/
- Center for Science Education http://cse.edc.org/

Standards (bookmark and/or download to your computer)

- Next Generation Science Standards (NGSS): http://www.nextgenscience.org/
- Common Core Standards :
    - http://www.corestandards.org/assets/CCSSI_ELA%20Standards.pdf
    - http://www.corestandards.org/assets/CCSSI_Math%20Standards.pdf
- English Language Proficiency: http://www.k12.wa.us/MigrantBilingual/ELD.aspx
- Environmental & Sustainability Education (ESE) Learning Standards:
    - http://www.k12.wa.us/EnvironmentSustainability/default.aspx

Course Assignments:

1. **Attendance and active participation and reading reflections**:
    - **Readings/Videos:** Weekly reading and/or video assignments are noted on the class schedule. Reflective discussions will take place during class and may also utilize online discussion groups through Sakai. TCs should be active readers by making notes and writing down questions, thoughts, and reflections to prepare to actively participate in reading discussions.
    - **Active participation**: Active participation means *being prepared for class, having completed assignments, and engaging in class discussions.* Participating means creating safe spaces, monitoring airtime, listening to and valuing others' ideas and perspectives, voicing concerns respectfully, being sensitive to who gets to speak, assuming "best intentions" and being mindful of impact, and being able to challenge each other.
2. **Three Teaching Enactments (TE) during weeks 3, 5, and 7:** Each TC will teach three 20-minute abbreviated lessons. Teaching enactment details will be provided in class. Teaching enactment lesson plans and reflection paper details will be provided in class.

Class Schedule and Summary of Assignment Due Dates:
The schedule, assignments, and course content are subject to change at the discretion of faculty member. This course features the Ambitious Science Teaching Practices (www.AmbitiousScienceTeaching.org)

WEEK 1: TUESDAY

A VISION FOR SCIENCE TEACHING AND LEARNING

Session Guiding Questions	Assignments Due
• Personal*: How did/do you experience science?* • Nature of science*: What is science?* • Student Learning*: What are children capable of?* • Science Teaching*: How does this vision align with culturally responsive practices?*	1. **COMPLETE Science & You Survey** *Type your responses in the Word Doc survey. Upload your survey responses to Sakai before class.* 2. **READ *Ready, Set, Science! (RSS)* Ch. 1 "A New Vision in Science Education"** (16 pp) **http://bit.ly/1pZ8ys9**

WEEK 1: THURSDAY

UNIT PLANNING: ENGAGEMENT WITH IMPORTANT IDEAS

Session Guiding Questions	Assignments Due
• Personal connection*: What makes you curious or motivates you to explore or research a topic?* • Unit planning*: What's the difference between a phenomenon, anchoring event, and a topic?* • Student learning*: How should students' resources influence unit planning?*	1. **WATCH "Planning for Engagement with Important Science Ideas" (0:00 to 9:20) http://bit.ly/1MflhzK** 2. **READ "Planning for Engagement with Important Science Ideas" primer (12 pp) http://bit.ly/2glIHtk**

WEEK 2: TUESDAY

UNIT PLANNING: ENGAGEMENT WITH IMPORTANT IDEAS

Session Guiding Questions	Assignments Due
• Personal connection*: Did you deepen your content knowledge this week related to your unit plan?* • Unit Planning*: How does your underlying explanation foreground the science concepts and ideas represented in your bundle of standards (NGSS, Common Core)?* • Assessment: *In setting unit objectives, what do we hope students can know and do by the end of the unit?*	1. **SKIM "Examples Bundles Guide" (24 pp) http://bit.ly/28YytHG** To help bundle NGSS. 2. **READ "Qualities of a Good Anchoring Phenomenon" (1 pp) http://bit.ly/1Q2hSaB** Aim for a phenomenon that meets a majority. 3. **READ "Planning for Engagement with Important Science Ideas" (12 pp) http://bit.ly/2glIHtk** 4. **COMPLETE Part 1 of your unit planner** Share in Google Drive and upload to Sakai.

WEEK 2: THURSDAY

LAUNCHING A UNIT: ELICITING STUDENTS' RESOURCES

Session Guiding Questions	Assignments Due
• Science Teaching: *How is asking students to consider a specific phenomenon different than students generating a KWL about the unit topic?* • Equity: *How could this focus on eliciting students' resources be seen as an equity practice?* • Unit planning: *How might you use ideas and questions students share?*	1. **READ *TSELL* Ch 1-2 "Science talks"; Ch 20-21 Equity** *What are science talks? Could science talks be considered an equity practice? Why or why not?* 2. **SKIM *RSS Ch 5* "Making Thinking Visible: Talk & Argument" http://bit.ly/2jyPMHZ** 3. **WATCH "Eliciting Students' Ideas" (16 minutes)** *What talk moves did you hear from the teacher? from students? How does this connect with the discussions about student talk from readings 1 & 2 above?*

WEEK 3: TUESDAY

LAUNCHING A UNIT: ELICITING STUDENTS' RESOURCES

Topic & Guiding Questions	Assignments Due
• Equitable instruction: *What talk, tasks, and tools support all students in communicating about their observations, initial ideas, and questions about how and why the specific phenomenon occurs?*	1. **READ *"Teaching Practice set: Eliciting students' ideas and adapting instruction"* (15 pp) http://bit.ly/21EIhL** 2. **WATCH "Scaffolds for making students initial ideas public" (9m 54s) http://bit.ly/1UbiT1e** *What is a model scaffold? How can model scaffolds help students express ideas? What might be some limitations? Why start from observations first?* 3. **COMPLETE lesson plan for eliciting students ideas** Follow 5 steps for eliciting and add them into the Antioch lesson plan. Share in GoogleDrive.

WEEK 3: THURSDAY

LAUNCHING A UNIT: ELICITING STUDENTS' RESOURCES

Topic & Guiding Questions	Assignments Due
TEACHING ENACTMENT I • Assessment: *How is this eliciting ideas practice a formative assessment? What does it reveal about student understanding? How do we use it to shape future instruction?*	1. **UPLOAD your revisions** to lesson plan based on peer feedback from Tuesday. Share in GoogleDrive. 2. **REHEARSE/PREPARE for teaching enactment I** - Bring copies/materials we need for your lesson. You do not have time to enact an entire lesson so fast-forward through some parts and go real-time for one part.

WEEK 4: TUESDAY

SUPPORTING STUDENTS' SCIENTIFIC SENSEMAKING

Topic & Guiding Questions	Assignments Due
• *Equitable instruction: What talk, tasks, and tools support <u>all</u> students in learning about and reasoning with science ideas?* • Assessment: *What are some possible opportunities for assessments when supporting students in making sense of science ideas?*	1. **COMPLETE TEI reflection** of eliciting ideas. 2. **WATCH & READ:**"Supporting ongoing sensemaking" (21 min) **https://vimeo.com/104463484** "Supporting on-going changes in thinking"(20pp) **http://bit.ly/1LCXxH3** 3. **SKIM *RSS* Chapters 6 & 7** (41 pp) "Learning from Science Investigations" **http://bit.ly/1Rfpi7H** "Making Thinking Visible: Models & Reps"**http://bit.ly/1RcyY3T** 4. **READ "Why focus on science and engineering practices not inquiry?"** (2pp) **http://bit.ly/2khQla9**

WEEK 4: THURSDAY

SUPPORTING STUDENTS' SCIENTIFIC SENSEMAKING

Topic & Guiding Questions	Assignments Due
• Equitable instruction: *What would students learn by engaging in a particular activity? What changes could support all learners?* • Academic language: *What are examples of vocabulary, language demands, syntax, and discourse in science?*	1. **OUTLINE 4 possible activities** for your unit plan. You may find these using internet searches or curriculum materials. Complete chart in Part II of your GoogleDoc unit plan for at least 2 of the 4 activities. 2. **READ *Literacy for Science*** Ch 3 "The language of science text and talk" (11 pp) **http://bit.ly/22GnWeK** 3. **READ "Understanding Language"**(12pp) **http://stanford.io/1LJdtjT**

WEEK 5: TUESDAY

SUPPORTING STUDENTS' SCIENTIFIC SENSEMAKING

Topic & Guiding Questions	Assignments Due
• Academic language: *What language demands are in your lesson? What scaffolds support all students' language use?* • Science Teaching: *How can we use readings and video to support students' learning?* • Student Voice: *What opportunities do students to reflect on their understanding?*	1. **SKIM *TSELL*** Part II: Teaching Academic Language 2. **READ** "Face to Face Tools"(13p)**http://bit.ly/2jtGr0N** to learn more about creating and revising public records 3. **READ** "How to use direct (or "just-in-time") instruction in your science classroom" (7pp) http://bit.ly/2jkTu9t 4. **WATCH** "Building Scientific Ideas with Interactive Read-alouds" (5 mins) http://bit.ly/2jl0sLN 5. **READ** "Watch-Think-Write and Proven Strategies for Using video in the classroom" http://bit.ly/2jl13wQ

WEEK 5: THURSDAY

SUPPORTING STUDENTS' SCIENTIFIC SENSEMAKING

Topic & Guiding Questions	Assignments Due
• *Equitable instruction: What talk, tasks, and tools support <u>all</u> students in making progress on their understanding over time?*	**COMPLETE lesson plan for one "Supporting ongoing changes in student thinking" lesson** using the Antioch lesson plan template. Share in GoogleDrive. You will give/receive peer feedback in class today.

WEEK 6: TUESDAY

SUPPORTING STUDENTS' SCIENTIFIC SENSEMAKING

Topic & Guiding Questions	Assignments Due
TEACHING ENACTMENT II • Assessment: *What assessment opportunities does this practice of supporting ongoing sensemaking provide? What does it reveal about student understanding? How do we use it to shape future instruction?*	1. **UPLOAD your revisions** to lesson plan based on peer feedback from Tuesday. Share in GoogleDrive. 2. **REHEARSE/PREPARE for teaching enactment II** - Bring copies/materials we need for your lesson. You do not have time to enact an entire lesson so fast-forward through some parts and go real-time for one part.

WEEK 6: THURSDAY

PRESSING FOR EVIDENCE BASED EXPLANATIONS

Topic & Guiding Questions	Assignments Due
• Nature of Science: *Why focus on evidence-based explanations? How does it relate to other science and engineering practices (SEP)?* • Science Teaching: *What lesson steps support students in revising their models and explanations?*	1. **COMPLETE TEII reflection** of supporting student sensemaking. 2. **WATCH & READ** "Pressing students for evidence-based explanations" (20min) https://vimeo.com/104469356 AND "Teaching Practice Set: Pressing for evidence-based explanation" (10 pp) http://bit.ly/1Rh9Llw

WEEK 7: TUESDAY

PRESSING FOR EVIDENCE BASED EXPLANATIONS

Topic & Guiding Questions	Assignments Due
• *Equitable instruction: What talk, tasks, and tools support <u>all</u> students in creating evidence-based explanations?*	**COMPLETE lesson plan for "Pressing or Evidence-based Explanation"** using the Antioch lesson plan template. Share in GoogleDrive. You will give/receive peer feedback on your plan in class today.

WEEK 7: THURSDAY

PRESSING FOR EVIDENCE BASED EXPLANATIONS

Topic & Guiding Questions	Assignments Due
TEACHING ENACTMENT III • Assessment: *What assessment opportunities does pressing for evidence-based explanations provide? What does it reveal about student understanding?*	1. **UPLOAD your revisions** to lesson plan based on peer feedback from Tuesday. Share in GoogleDrive. 2. **REHEARSE/PREPARE for teaching enactment III** - Bring copies/materials we need for your lesson. You do not have time to enact an entire lesson so fast-forward through some parts and go real-time for one part. *** TEIII reflection due within 1 week of your enactment. Also, please complete the course survey and evaluation ☺

Rubrics for assignments

Assignment	Expectations not met	Expectations Met	Expectations Met High
Attendance and completion of reading	More than 2 absences, or make-up assignments for absences were not completed, or did not meet expectations; Not prepared for class	One-two absence(s) during quarter, and make-up assignment met expectations; prepared for class	No absences during quarter; Prepared for and engaged in class
Teaching Enactment I: Eliciting student ideas with reflection paper	TE I LP not completed according to AUS standards.	TE I LP completed according to AUS and course standards. Lesson elicited student understanding of scientific big idea. Candidate linked assessment to learning objective.Student learning guided lesson.Active participant in peer's lessons and reflection.Lesson reflection complete. Level 1 or 2 on EdTPA rubric distributed in class.	Met requirements. Candidate preplanned back pocket questions and used student responses to inform instruction and direction of lesson. Lesson plan reflection reflected deep knowledge of positive impact on student learning and student voice. Level 3, 4 or 5 on EdTPA rubric distributed in class.
Teaching Enactment II: Sense making opportunities with reflection paper	TE II LP not completed according to AUS standards.	TE II LP completed according to AUS and course standards. Lesson based on elicitation of student understanding obtained in TE I. Lesson provided students with sense making opportunities of the scientific big idea. Candidate linked assessment to learning objective.Student learning guided lesson.Active participant in peer's lessons and reflection.Lesson reflection complete. Level 1 or 2 on EdTPA rubric distributed in class.	Met requirements. Candidate preplanned back pocket questions and used student responses to inform instruction and direction of lesson.Candidate's lesson allowed for student understanding to be exposed through classroom dialogue. Opportunities for students to reflect upon learning objective and self-assessment were provided. Lesson plan reflection reflected deep knowledge of positive impact on student learning and student voice. Level 3, 4 or 5 on EdTPA rubric distributed in class.
Teaching Enactment III: Application of learning with reflection paper	TE III LP not completed according to AUS standards.	TE III LP completed according to AUS and course standards. Students provided with opportunities to apply scientific big idea to a new situation. Candidate linked assessment to learning objective. Active participant in peer's lessons and reflection. Student learning guided lesson. Lesson reflection complete. Growth over three lesson sequence. Level 1 or 2 on EdTPA rubric distributed in class.	Met requirements. Candidate preplanned back pocket questions and used student responses to inform instruction and direction of lesson. Significant growth over three-microteaching lessons--attention to specific instructional practices that pushed candidate to focus on student learning. Lesson plan reflection reflected deep knowledge of positive impact on student learning and student voice. Level 3, 4 or 5 on EdTPA rubric distributed in class.
Overall course outcome	One or more of class assignments or expectations were not met.	All class assignments or expectations were met.	All class assignments or expectations met at a high level.

Antioch University Policies

Antioch University is committed to building a vibrant and inclusive educational environment that promotes learning and the free exchange of ideas. Our academic and learning communities are based upon the expectation that their members uphold the shared goal of academic excellence through honesty, integrity, and pride in one's own academic efforts and respectful treatment of the academic efforts of others.

All students are expected to comply with Antioch University policies, including the Title IX Sexual Harassment and Sexual Violence Policy and the Student Conduct Policy. To access academic, student, and other university policies are available online: http://aura.antioch.edu/au_policies/.

Antioch University Seattle Procedures

In addition to the above Course Requirements, students are responsible for abiding by the description of professional behavior as well as the following guidelines. Refer to the current Antioch University Seattle Catalog and the current Antioch University Student Handbook for full descriptions and procedures.

1. Attendance: Students are expected to attend all scheduled classes. Credits may be denied for failure to attend classes. Refer to the current Antioch University Seattle Catalog for full description.
2. Plagiarism: Plagiarism is defined as the presentation of an idea or a product as one's own, when that idea or product is derived from another source and presented without credit to the original source. "Idea or product" includes not only written work but also artworks, images, performances or ideas expressed orally of via any electronic, or other medium. Refer to the current Antioch University Seattle Catalog for full description and procedures.
3. Student Suspension, Dismissal, or Exclusion from Class Procedures. Refer to the current Antioch University Seattle Student Handbook for full description and procedures.
4. Communication Protocol: All students must have access to computer technology. AUS maintains a computer laboratory as well as computer access in the AUS Library.
   E-mail accounts and addresses are assigned for all Antioch Seattle students. Students are required to check their e-mail accounts at least weekly and are responsible for being aware of information posted as official announcements and through their programs.
   To comply with students' record confidentiality and security requirements, official e-mail communication with Antioch Seattle, including e-mail between students and instructors, should originate from and be conducted within the Antioch University Seattle e-mail system. Refer to the current Antioch University Seattle Catalog for full description and procedures.
5. Incomplete Policy and In Progress. The University expects students to complete all coursework by the end of the quarter. In exceptional circumstances, students may request an exception and negotiate with the instructor for an Incomplete (Inc). An Incomplete may be granted solely at the discretion of the instructor. Classroom courses may be allowed up to one additional quarter. Other courses may be allowed up to two additional quarters to complete the Inc. If the work is not completed by the final deadline set by the instructor and an assessment has not been submitted, a No Credit (NC) will be assigned, not subject to change. To earn credit for a course deemed No Credit or permanently incomplete, the student must reenroll in and repay for the course. Incomplete contracts are not available to non-matriculated/visiting students. Upon withdrawal from Antioch, outstanding courses incomplete are converted to NC (No Credit). An NC is permanent and not subject to change. Students must complete all course and degree requirements prior to or on the last day of classes of a term to be eligible to graduate that term. Refer to the current Antioch University Seattle Catalog for full description and procedures.

Reasonable Accommodation of Students with Disabilities

Antioch University is committed to providing reasonable accommodations to qualified students with disabilities in accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 2008. Students with disabilities may contact the Disability Support Services office to initiate the process and request accommodations that will enable them to have an equal opportunity to benefit from and participate in the institution's programs and services. Students are encouraged to do this as early in the term as possible, since reasonable accommodations are not retroactive. The Disability Support Services office is available to address questions regarding reasonable accommodations at any point in the term.

Students in need of accommodation should contact the Disability Support Services (DSS) Office 206-268-4151 or TTY: 206-728-5745 or dss@antioch.edu to request reasonable accommodations.

Students are responsible for giving their faculty members a Letter of Accommodation from the DSS office as soon as possible in the quarter. In cases that the disability accommodation of extended time on assignments is granted, each assignment must be discussed and specific due dates agreed upon in advance between student and faculty.

All assignments align with AUS GTP Program Outcomes and AUS School of Education's conceptual framework

Program outcomes:

1. Multicultural Competency and Sensitivity, and a Commitment to Social Justice
2. Reflective Practice
3. Personal Qualities as a Leader
4. Knowledge of the Learner
5. Content Area Expertise
6. Student-centered Curriculum and Instruction
7. Personal Qualities as a Teacher
8. Sensitivity to the Community Context of Teaching and Learning
9. Responsibility to Washington State Standards

Conceptual Framework

1) Promotion of constructivist pedagogy
2) Promotion of critical reflection
3) Promotion of deep commitment to social justice through transformative education
4) Promotion of dedication to the learner's growth, in school and beyond

Course assignment alignment with State and University Standards

Standard V (WAC 181-78A-270(1))	edTPA Washington rubric (from Elem. Math TPA)	Course assignments
a. Effective teaching		
(i)Using multiple instructional strategies, including the principles of second language acquisition, to address student academic language ability levels and cultural and linguistic backgrounds	EM10: How does the candidate use knowledge of students' language development to identify a key language demand central to content learning? EM11: How does the candidate support academic language development associated with content learning? EM12: How does the candidate reveal students' understanding and use of academic language associated with content learning?	Teaching Enactment & Reflections
(ii) Applying principles of differentiated instruction, including theories of language acquisition, stages of language, and academic language development, in the integration of subject matter across the content areas of reading, mathematical, scientific, and aesthetic reasoning	EM10: How does the candidate use knowledge of students' language development to identify a key language demand central to content learning? EM11: How does the candidate support academic language development associated with content learning? EM12: How does the candidate reveal students' understanding and use of academic language associated with content learning?	Teaching Enactment & Reflections Readings Class discussion
(iii) Using standards-based assessment that is systematically analyzed using multiple formative, summative, and self-assessment strategies to monitor and improve instruction	EM3: How are the informal and formal assessments selected or designed to provide evidence of student progress toward the standards/learning targets? EM6: How does the candidate demonstrate an understanding of student performance with respect to standards/learning targets? EM8: How does the candidate use conclusions about what students know and are able to do to plan next steps in instruction? EM7: How does the candidate provide students feedback to guide their further learning? EM9: How does the candidate use evidence to evaluate and change teaching practice to meet the varied learning needs?	Teaching Enactment & Reflections
(iv) Implementing classroom/school centered instruction, including sheltered instruction that is connected to communities within the classroom	EM4: How does the candidate actively engage students in developing understandings of mathematical concepts?	Teaching Enactment Readings Class discussion

and the school, and includes knowledge and skills for working with others		
(v) Planning and/or adapting standards-based curricula that are personalized to the diverse needs of each student	EM2: How does the candidate use knowledge of his/her students to target support for students' development of conceptual understanding, computational/procedural fluency, and mathematical reasoning/problem solving skills?	Lesson planning Teaching Enactment & Reflection Readings Class discussion
(vi) Aligning instruction to the learning standards and outcomes so all students know the learning targets and their progress toward meeting them	EM13: How does the candidate focus student attention on the learning targets? EM14: How does the candidate support students to access resources for learning and to monitor their own learning progress? EM15: How does the candidate use student-voice evidence to identify instructional improvements?	Lesson planning Teaching Enactment & Reflection
(vii) Planning and/or adapting curricula that are standards driven so students develop understanding and problem-solving expertise in the content area(s) using reading, written and oral communication, and technology	EM1: How do the candidate's plans build conceptual understanding, computational/procedural fluency, and mathematical reasoning/problem solving skills? EM4: How does the candidate actively engage students in developing understandings of mathematical concepts? EM5: How does the candidate elicit and monitor students' responses to deepen their understanding of mathematical concepts?	Teaching Enactment
(viii) Preparing students to be responsible citizens for an environmentally sustainable, globally interconnected, and diverse society		Teaching Enactment
(ix) Using technology that is effectively integrated to create technologically proficient learners		Teaching Enactment Discussion Forum
(x) Informing, involving, and collaborating with families/neighborhoods, and communities in each student's educational process, including using information about student cultural identity, achievement and performance	EM2: How does the candidate use knowledge of his/her students to target support for students' development of conceptual understanding, computational/procedural fluency, and mathematical reasoning/problem solving skills?	Teaching Enactment Discussion Forum
b. Professional development		
Developing reflective, collaborative, professional growth-centered practices through regularly evaluating the effects of his/her teaching through feedback and reflection	EM8: How does the candidate use conclusions about what students know and are able to do to plan next steps in instruction EM9: How does the candidate use evidence to evaluate and change teaching practice to meet the varied learning needs?	Teaching Enactment Peer Feedback Lesson planning
c. Teaching as a profession		
(i)Participating collaboratively and professionally in school activities and using appropriate and respectful verbal and written communication	NA	Pre-internships Class discussion
(ii)Demonstrating knowledge of professional, legal, and ethical responsibilities and policies	NA	Pre-internships

Course Acknowledgements
I would like to acknowledge the work of Dr. Sara Hagenah for her support and feedback on this syllabus and assignments based on her previous experiences designing and facilitating this course over the past several years.