SNC Mission Statement
Sierra Nevada College graduates will be educated to be scholars of and contributors to a sustainable world. Sierra Nevada College combines the liberal arts and professional preparedness through an interdisciplinary curriculum that emphasizes entrepreneurial thinking and environmental, social, economic and educational sustainability.

The Core Themes:
Liberal Arts                        Professional Preparedness
Entrepreneurial Thinking          Sustainability

Course Description
This course is designed to assist teachers with developing the child’s understanding and appreciation of mathematics and science. Methods of mathematics include remediation of pupil difficulties, skill in computation and recent trends, and organizing science education at the various elementary grade levels. Learning includes demonstration techniques.

Teacher Candidate Learning Outcomes Based on NCTM

1. Candidates possess a deep understanding of how students learn mathematics and of the pedagogical knowledge specific to mathematics teaching and learning.
2. Candidates support a positive disposition toward mathematical processes and mathematical learning.
3. Candidates embrace technology as an essential tool for teaching and learning mathematics.
4. Candidates recognize, use and make connections between and among mathematical ideas in contexts outside mathematics to build mathematical understanding.

SNC Teacher Education Program Goals
6. Develop effective lessons organized into cohesive units
7. Help students effectively interact with new knowledge
8. Provide students with ways to practice and deepen their understanding of new knowledge.
9. Instruct students to generate and test hypotheses about new knowledge.

Common Core State Standards:
• #2 Construct viable arguments
  Mathematically proficient students understand and use stated assumptions, definitions and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They break things down into cases and can recognize and use counterexamples. They use logic to justify their conclusions, communicate them to others and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose.
• #3 Make sense of complex problems and persevere in solving them
Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They consider analogous problems; try special cases and work on simpler forms. They evaluate their progress and change course if necessary. They check their answers to problems using a different method, and they continually ask themselves, “Does this make sense?”

• #5 Look for and express regularity in repeated reasoning
Mathematically proficient students pay attention to repeated calculations as they carry them out, and look both for general algorithms and for shortcuts. As they work through the solution to a problem, proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

• #6 Make strategic decisions about the use of technological tools
Mathematically proficient students consider the available tools when solving a mathematical problem, whether pencil and paper, ruler, protractor, graphing calculator, spreadsheet, computer algebra system, statistical package, or dynamic geometry software. They are familiar enough with all of these tools to make sound decisions about when each might be helpful. They use mathematical understanding and estimation strategically, attending to levels of precision, to ensure appropriate levels of approximation and to detect possible errors. They are able to use these tools to explore and deepen their understanding of concepts.

InTASC Model Core Teaching Standards
1. The teacher understands how learners grow and develop, recognizing that patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas, and designs and implements developmentally appropriate and challenging learning experiences.
2. The teacher uses understanding of individual differences and diverse cultures and communities to ensure inclusive learning environments that enable each learner to meet high standards.
3. The teacher works with others to create environments that support individual and collaborative learning, and that encourage positive social interaction, active engagement in learning, and self-motivation.
4. The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and creates learning experiences that make these aspects of the discipline accessible and meaningful for learners to assure mastery of the content.
5. The teacher understands how to connect concepts and use differing perspectives to engage learners in critical thinking, creativity, and collaborative problem solving related to authentic local and global issues.
6. The teacher understands and uses multiple methods of assessment to engage learners in their own growth, to monitor learner progress, and to guide the teacher’s and learner’s decision making.
7. The teacher plans instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, curriculum, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context.
8. The teacher understands and uses a variety of instructional strategies to encourage learners to develop a deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways.

Assessment of Teacher Candidate Learning Outcomes
Grading Policy
Any student receiving a grade of C+ or below in any course is required to repeat the course regardless of the student’s current Academic Standing (SNC 2015–2016 Catalog, p. 182).

A = 950–1000 points
A- = 900–949
B+ = 850–899
B = 800–849
B- = 750–799
<table>
<thead>
<tr>
<th>Assessment</th>
<th>Points</th>
<th>Teacher Candidate Learning Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance</td>
<td>10 pts x 15 = 150</td>
<td>1 - 6</td>
</tr>
<tr>
<td>Chapter Reflections</td>
<td>10 pts x 15 = 150</td>
<td>1, 2, 3, 4</td>
</tr>
<tr>
<td>Reflective Activity</td>
<td>10 pts x 10 = 100</td>
<td>2</td>
</tr>
<tr>
<td>Problem Solving and Midterm</td>
<td>300</td>
<td>1, 4</td>
</tr>
<tr>
<td>Annotated Bibliography</td>
<td>200</td>
<td>1, 3</td>
</tr>
<tr>
<td>Final Unit Presentation</td>
<td>100</td>
<td>1, 2, 3, 4</td>
</tr>
</tbody>
</table>

Instructional Strategies for this Class
Instructional practices used in this course include lecture, Socratic dialogues, individual and small group activities, integration of technology, and ongoing constructive feedback.

Required Texts and Resources


Microsoft Word for PCs or Macs—Documents must be saved and sent in either .doc or .docx formats. Candidates must become familiar with the track changes tool in Microsoft since this will be used to provide feedback.

Prim Library Resources
Using the library’s resources effectively (not just the Internet) contributes to developing each of SNC’s core themes by exposing students to high quality academic resources, diverse opinions, new ideas, and a future that includes building on a liberal arts education. In this course, you will be expected to utilize the library’s resources (either on-site or remotely) as you complete your assignments. The Libguides pages have a research guide specifically for education students:
http://libguides.sierranevada.edu/edu
http://libguides.sierranevada.edu/library
To access SNC’s licensed database content from off campus, use the following information:

- **Students**: Use your first initial and your last name as the username and your 9-digit student ID number as the password.
- **Faculty/Staff**: Use your SNC email username as the username and your Banner/SNCSIS ID number as the password.

If you have questions or problems, please contact the library at library@sierranevada.edu.
Betts Markle, Library Director emarkle@sierranevada.edu 775-881-7511

Laptop Computer Requirements
Graduate courses require the use of a laptop computer. Details are specified in course syllabi. It is the students' responsibility to provide their own laptop computer.

Computer Skill Competency Requirements - must be proficient in technology skills including but not limited to:

- Basic computer skills, including the ability to create folders; find, copy, move, rename, and delete files; maximize/minimize multiple windows; and download and save files
- Ability to use a word processor application to create, save, print, and retrieve a document; cut, copy, and paste text within and between documents; and save a word processing document in a Microsoft Word compatible format (.doc).
- Ability to access SNC email that you check regularly. In addition, you must be able to send, receive, open, and store messages and attachments.
• When online, ability to navigate between web sites, use search engines, install needed plug-ins such as Flash or QuickTime players, and disable popup blockers or white-list sites as needed for online courses.

While basic skills are needed, students have opportunities to develop additional skills, including media development and the use of conferencing and collaboration tools.

It is recommended that students have a relatively new or updated computer—either a PC running Windows 7 or Vista, or a Mac running OSX 10.4 or higher. In addition, it is recommended that students have high-speed Internet access, a printer, speakers, and a headset microphone.

**Class Expectation for Teacher Candidates**

**Attendance**
Teacher Education candidates are expected to attend all scheduled classes. Students having more than two absences during a 3-credit course may be asked to withdraw from the course and repeat it at a later date. All instructor decisions regarding attendance will be supported by the administration (SNC 2015–2016 Catalog).

Teacher candidates are expected to arrive to class prepared for each class and to conduct themselves in a professional manner when communicating with the instructor and class members.

**Late Assignments**
Students are required to inform the instructor via email at least 24 hours in advance of the due date if their assignment will be late in order for it to be considered for partial credit. Assignments turned in after the due date will lose 5% of total possible points for each day the assignments are overdue.

**Use of Electronic Devices**
While electronic devices are commonplace, students are asked to use common courtesy and common sense in the use of electronic devices during class sessions. Using laptop computers during class to enhance learning is encouraged. Please avoid using them for non-class related purposes. The ringing of cell phones is distracting to the instructor and other students, so please turn the phones off during class. Texting during class may interfere with your ability to focus on the content of the class, so please refrain from doing so in class. In case of an emergency that requires you to maintain contact with someone outside of class, please inform the instructor at the beginning of class, and leave the class quietly to use the device when necessary.

**Academic Accommodations**
Sierra Nevada College is committed to protecting disability rights and accommodating students as defined in the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973. Students with physical, learning, or psychological disabilities who wish to request accommodations are required to present appropriate documentation of their disabilities to the Director of Academic Support Services, who will make the necessary accommodations available as appropriate to the documented disability on file. It is suggested that students seeking accommodations contact the Director before the semester begins to make their request. Specific information about a student’s disability is kept confidential. Every effort will be made by the faculty and staff of Sierra Nevada College to provide reasonable accommodations. **It is the student’s responsibility to request accommodations.**

**The SNC Email System**
The SNC email system is the official communication vehicle among students, faculty members and administrative staff, and is designed to protect the confidentiality of student information as required by the Family Educational Rights and Privacy Act of 1974 Act (FERPA). Students should check their college email accounts daily during the school year. Students have a right to forward their SNC e-mail to another e-mail account (for example, @hotmail or @gmail); however, confidentiality of student information protected by FERPA cannot be guaranteed for SNC e-mail forwarded to an outside vendor. Having email redirected does not absolve a student from the responsibilities associated with official communication sent to his or her SNC email account.
Sanctions for Cheating and/or Plagiarism

The Honor Code
The faculty of SNC believes students must be held to high standards of integrity in all aspects of college life in order to promote the educational mission of the College and to encourage respect for the rights of others. Each student brings to the SNC community unique skills, talents, values and experiences which, when expressed within the community, contribute to the quality of the educational environment and the growth and development of the individual. Students share with members of the faculty, administration and staff the responsibility for creating and maintaining an environment conducive to learning and personal development, where actions are guided by mutual respect, integrity, responsibility, and trust. The faculty and students alike must make diligent efforts to ensure high standards are upheld by their colleagues and peers, as well as themselves. Therefore, faculty and students accept responsibility for maintaining these standards at Sierra Nevada College and are obligated to comply with its regulations and procedures, which they are expected to read and understand.

Cheating and/or Plagiarism
Academic honesty requires students to assume individual responsibility for assignments and tests. Students who copy the work of other students have violated this policy. Those who allow others to copy their work have also violated this policy. One goal of a Sierra Nevada College education is to help students develop their writing skills, including the ability to integrate and cite information gleaned from various sources to support the articulation of their own ideas. According to Funk & Wagnall Standard Desk Dictionary (1974), plagiarism is defined as “passing off a source’s information, ideas, or words as one’s own by failing to acknowledge the sources.” This refers to all sources of information, including the Internet.

Plagiarism occurs when an individual represents someone else’s words, ideas, phrases, sentences or data, whether oral, in print or in electronic form, including internet sources, as his/her own work. Examples include, but are not limited to:
1. Using the exact words (verbatim) of another source without quotations and appropriate referencing.
2. Using the ideas, thoughts, opinions, data or theories of another without a reference, even if completely paraphrased.
3. Using charts and diagrams from another source without revision, permission from the author and/or appropriate referencing.
4. Using facts and data from another source without a reference unless the information is considered common knowledge.

Teacher Candidate Education Dispositions

Role of Dispositions
Teaching involves more than effective planning, instructional knowledge, and teaching skills. It also extends to professional dispositions. Dispositions are similar to professional beliefs or values systems, but they are more than that. Dispositions extend to professional modes of conduct and the ways in which beliefs and attitudes are displayed by teachers’ actions in and out of the classroom. Teachers with positive professional dispositions tend to act in ways that elevate the profession of teaching in the eyes of others. (Ros-Voseles & Moss, 2007)

Teacher education programs bear a responsibility to convey, model, and promote positive standards of professional conduct. They also should maintain screening and assessment procedures to assure that teacher candidates with negative dispositions at odds with professional standards are not permitted to persist in teacher education programs. The teacher education program at Sierra Nevada College assesses their candidates’ knowledge, skills, and dispositions. Teaching dispositions also extend to maintaining the ethical standards of teachers’ professional societies (for example, Council for Exceptional Children, National Council of Teachers of Mathematics, etc.).

Professional dispositions include interactions with fellow students, professors, advisors, college and school personnel, and SNC staff members. Professional dispositions can impact the determination by the Department of Teacher Education regarding approval for field experience placements (student teaching and practicum).

Sierra Nevada College teacher education has identified the InTASC critical dispositions that should be possessed by program graduates. Please refer to your course syllabi, online course announcements or program handbook for detailed professional dispositions expectations.
Sierra Nevada College Teacher Education Dispositions

If sincerely held, dispositions should lead to actions and patterns of professional conduct. Teachers should be role models and model positive behaviors for their students. The dispositions are briefly described below:

- **Reflection** – Teachers should recognize that professional reflection combined with experience leads to professional growth. Teachers should be thoughtful about their teaching, critically examine their teaching practices, and strive for ongoing professional improvement.

- **Professional conduct** – Teachers should exercise sound judgment and ethical professional behavior. Teachers should represent positive role models for their students and be supportive colleagues with other professionals and paraprofessionals.

- **Respect for diversity** – Teachers should be sensitive to individual differences among students and promote understanding of students’ varied cultural traditions and learning strengths and needs.

- **High expectations** – Teachers should believe that their students can learn and should set high, yet realistic goals for student success. Teachers should communicate those high expectations to their students in positive ways.

- **Respect for others** – Teachers should develop and maintain classroom communities marked by student respect for other students and free from bullying and belittling behaviors. Teachers should interact with their students, fellow teachers, administrators, parents, and other community members with courtesy and civility. Respect is also demonstrated by pre-service teachers in the professionally appropriate ways in which they address fellow students, staff, faculty members, and administrators.

- **Compassion** – Teachers should demonstrate professional friendliness, warmth, and genuine caring in their relationships with students. Teachers should attempt to establish student-teacher relationships characterized by respect and rapport.

- **Advocacy** – Teachers should work to promote positive changes in schools and communities that benefit the welfare of their students. Teachers should work to assure that their students are afforded the services they need.

- **Curiosity** – Teachers should promote and support curiosity in their students and encourage active inquiry. Teachers should be professionally active lifelong learners and seek opportunities for professional development.

- **Dedication** – Teachers should be committed to the profession of teaching and to the betterment of their schools, communities, and students. Dedication is also demonstrated by pre-service teachers by class attendance, participation, completion of outside readings and assignments, and overall performance in teacher education courses.

- **Honesty** – Teachers should model personal and academic integrity by their actions. Teachers should be forthright in their interactions with others and uphold high standards of trust, character, and academic integrity.

- **Fairness** – Teachers should promote social justice, treat students equitably, maintain appropriate standards of confidentiality, and exercise fairness in academic assessment. Teachers should promote fairness in students’ interactions with others.

Final grades lower than B- in required professional education courses will be recorded and monitored. If patterns of low performance are noted, a conference with the Department Chairperson will be required; if concerns remain after the Department Chairperson conference, the student is referred to the Provost for development of a plan of action for changing behaviors that have been questioned or for possible removal from teacher education.

**Description of Assignments and Evaluations General Guidelines:**

All written assignments must be typed. Please double-space, use 12 point Times New Roman font and one-inch margins. Use APA format for in-text citations and reference lists as needed.

Assignments are due at the beginning of the class session on the due date. Papers received after 7 p.m. on the day of class they are due, will receive a deduction of points as outlined on the rubric. Additional points will be deducted for each day late. Assignments received more than a week late will not be accepted.

Assignments should be submitted as both a hard copy and an electronic copy. Include samples and activity materials when appropriate. Student samples, artifacts, and/or activity materials should be scanned as a pdf document. Assignments should be e-mailed to: tna@sierranevada.edu.
Due dates for all assignments will be provided to students on the first day of class. Rubrics are provided in the syllabus, will be provided at the beginning of the course or at least 2 weeks prior to the due date of the assignment.

E-mailed assignments must be in Microsoft Word format. Receipt will be acknowledged via e-mail. All lesson plans must be completed on the SNC Lesson Plan template or no credit will be given for the assignment.

**Participation – 100 points**
Teacher candidates have the opportunity to participate in class, ask questions, make comments and discuss ideas with other class members and the instructor throughout the course. It is imperative that teacher candidates arrive each week prepared to participate with necessary materials and assigned readings and work completed. Evaluation is based on their overall participation in class over the entire course, not weekly.

<table>
<thead>
<tr>
<th>Rubric for Overall Participation</th>
<th>Exceeds Standard 95-100 points</th>
<th>Meets Standard 80-94 points</th>
<th>Below Standard 79 points and below</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency of Participation</td>
<td>Participation in ALL classes</td>
<td>Participation in 85-90% of classes</td>
<td>Participation in 80% or less of classes</td>
</tr>
<tr>
<td>Quality of Participation</td>
<td>Thoughtful questions and comments; Provided insightful responses and promoted thought-provoking discussions that indicated class preparation; respectful of others comments and perspectives</td>
<td>Thoughtful questions and comments; Provided insightful responses and promoted thought-provoking discussions that indicated class preparation; respectful of others comments and perspectives</td>
<td>Questions and responses showed lack of class preparation; unprofessional language; disrespectful of others comments and perspectives</td>
</tr>
</tbody>
</table>

**Chapter Reflections – 230 points**
Weekly throughout the semester you will be required to reflect on one topic of interest for EACH weekly reading assignment. Use these reflections to describe future use of topic, ask questions, voice concerns, and reflect on your teaching or educational experience. You will need to be prepared to discuss these with the class, as we will include them in our group discussions. All reflections are due at the beginning of class. Five points will be deducted from each chapter that is turned in late. Each chapter reflection should be at least a half-page, not exceeding a full page. Name, date, and title of assignment should be noted in the upper right-hand corner. A cover sheet is NOT necessary for the Chapter Reflection assignments.

**Math Annotated Bibliography – 100 points**
Each student will conduct an Internet search and create an annotated bibliography of ten math websites. The bibliography must follow proper APA style guidelines. There are many websites that offer guides to creating annotated bibliography. Copies of the annotated bibliography must be provided for each student in the class, and the instructor.

**Annotated Bibliography Rubric**

<table>
<thead>
<tr>
<th>Required Items</th>
<th>Points Awarded/Points Possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>APA Style Guidelines were followed and each source adequately described</td>
<td>___pts./10 pts. Possible</td>
</tr>
<tr>
<td>10 Math Sources included in Annotated Bibliography</td>
<td>___pts./10 pts. Possible</td>
</tr>
<tr>
<td>Math content was age/grade appropriate</td>
<td>___pts./10 pts. Possible</td>
</tr>
<tr>
<td>Brief description of each website</td>
<td>___pts./60 pts. Possible</td>
</tr>
<tr>
<td>Provided Annotated Bibliography for all class members</td>
<td>___pts./10 pts. Possible</td>
</tr>
</tbody>
</table>

Total Points ___pts./100 pts. Possible
Reflective Activity – 120 points

It was a wise man who said that there is no greater inequality than the equal treatment of unequals. Supreme Court Justice Felix Frankfurter in Dennis v. U.S., 339 US 162 (1950), p 184.

Educational equity is a key component of helping all students meet the goals of the NCTM standards. Teacher candidates will create Foldables addressing: mathematics for all children, providing for students with special needs, culturally and linguistically diverse students, working toward gender equity, reducing resistance and building resilience, and providing for students who are mathematically gifted. Each section will be worth 20 points.

Mid-Term Problem Solving Literacy/Math Lesson Plan Presentation – 100 points

Each student will select a piece of children's literature that can be developed into a problem solving lesson or that can be used to provide the context (theme) for a series of mathematics lessons. The piece of literature (a children's storybook) may be either: (a) a story that deals directly with a mathematical concept or (b) a story that can be used as a theme for generating problems. The problems should not be simply counting the number of objects in a picture, but involve higher-order concepts. Each student will present their book and problem situation in a 15/20 minute Mathematics lesson. A complete lesson plan must be written and submitted using the format provided in the Components of an Effective Lesson. The lesson must be taught using methods and strategies acquired during the course. Students will be expected to observe and critique other students' lessons so that everyone may learn from example and feedback. Copies of the lesson plan must be provided for each student in class, and the instructor.

Mid-Term Problem Solving Literacy/Math Lesson Plan Presentation Rubric

<table>
<thead>
<tr>
<th>Required Items</th>
<th>Points Awarded/Points Possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components of an Effective Lesson Included (Materials, including technology)</td>
<td>___pts./10 pts. Possible</td>
</tr>
<tr>
<td>Common Core State Standard(s)</td>
<td>___pts./10 pts. Possible</td>
</tr>
<tr>
<td>Strategies Identified and Used</td>
<td>___pts./10 pts. Possible</td>
</tr>
<tr>
<td>Assessment Formative and/or Summative</td>
<td>___pts./10 pts. Possible</td>
</tr>
<tr>
<td>Objectives for all learners-Cognitive Level (DOK or Bloom’s)</td>
<td>___pts./10 pts. Possible</td>
</tr>
<tr>
<td>Before lesson components</td>
<td>___pts./10 pts. Possible</td>
</tr>
<tr>
<td>During lesson components</td>
<td>___pts./10 pts. Possible</td>
</tr>
<tr>
<td>After lesson components</td>
<td>___pts./10 pts. Possible</td>
</tr>
<tr>
<td>Teacher/Presenter knows concept/content/etc. and was prepared for lesson</td>
<td>___pts./10 pts. Possible</td>
</tr>
<tr>
<td>Copy of lesson plan included for all class members</td>
<td>___pts./10pts. Possible</td>
</tr>
<tr>
<td><strong>Total Points</strong></td>
<td>___pts./100 pts. Possible</td>
</tr>
</tbody>
</table>

Math Problem Based Lesson Plan Presentation – 100 points

Each student will present a 20-minute Mathematics lesson. A complete lesson plan must be written and submitted using the format provided in the Components of an Effective Lesson. The lesson must be taught using methods and strategies acquired during the course. Students will be expected to observe and critique other students’ lessons so that everyone may learn from example and feedback. Copies of the lesson plan must be provided for each student in class, and the instructor.

Math Problem Based Lesson Plan Presentation Rubric

<table>
<thead>
<tr>
<th>Required Items</th>
<th>Points Awarded/Points Possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components of an Effective Lesson Included (Materials, including technology)</td>
<td>___pts./10 pts. Possible</td>
</tr>
<tr>
<td>Common Core State Standard(s)</td>
<td>___pts./10 pts. Possible</td>
</tr>
<tr>
<td>Strategies Identified and Used</td>
<td>___pts./10 pts. Possible</td>
</tr>
<tr>
<td>Assessment Formative and/or Summative</td>
<td>___pts./10 pts. Possible</td>
</tr>
<tr>
<td>Objectives for all learners-Cognitive Level (DOK or Bloom’s)</td>
<td>___pts./10 pts. Possible</td>
</tr>
<tr>
<td>Before lesson components</td>
<td>___pts./10 pts. Possible</td>
</tr>
<tr>
<td>During lesson components</td>
<td>___pts./10 pts. Possible</td>
</tr>
<tr>
<td>After lesson components</td>
<td>___pts./10 pts. Possible</td>
</tr>
<tr>
<td>Teacher/Presenter knows concept/content/etc. and was prepared for lesson</td>
<td>___pts./10 pts. Possible</td>
</tr>
<tr>
<td>Copy of lesson plan included for all class members</td>
<td>___pts./10pts. Possible</td>
</tr>
<tr>
<td><strong>Total Points</strong></td>
<td>___pts./100 pts. Possible</td>
</tr>
</tbody>
</table>
Final – Working Portfolio – 250 Points
Each student will develop a portfolio of study in Mathematics. Topics could vary depending on each individual student. A binder with dividers will be required for the unit. Each unit will contain a table of contents, statement of your personal philosophy of mathematics education, chapter reflections, reflection activities, problem solving presentation, midterm lessons, annotated bibliography and other items as announced. The unit should look professional. Students will need to start developing their unit as soon as possible in order to complete it on time for the last two weeks of class.

Final – Presentations/Portfolio Rubric

<table>
<thead>
<tr>
<th>Required Items</th>
<th>Points Awarded</th>
<th>Points Possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table of Contents included (specifically documents all the contents of the course)</td>
<td>___pts.</td>
<td>20 pts. Possible</td>
</tr>
<tr>
<td>Chapter Reflections Chapters 1-23</td>
<td>___pts.</td>
<td>25 pts. Possible</td>
</tr>
<tr>
<td>Handouts/Misc.</td>
<td>___pts.</td>
<td>25 pts. Possible</td>
</tr>
<tr>
<td>Reflection Activity/Foldables</td>
<td>___pts.</td>
<td>20 pts. Possible</td>
</tr>
<tr>
<td>Midterm Lesson Plans</td>
<td>___pts./50 pts.</td>
<td>50 pts. Possible</td>
</tr>
<tr>
<td>Annotated Bibliography</td>
<td>___pts./20 pts.</td>
<td>20 pts. Possible</td>
</tr>
<tr>
<td>Portfolio looks professional (typed, spelling, binder with tabs, etc)</td>
<td>___pts./40 pts.</td>
<td>40 pts. Possible</td>
</tr>
<tr>
<td>Personal philosophy of mathematics education</td>
<td>___pts./50 pts.</td>
<td>50 pts. Possible</td>
</tr>
<tr>
<td><strong>Total Points:</strong></td>
<td>___pts./250 pts.</td>
<td>250 pts. Possible</td>
</tr>
</tbody>
</table>

Additional Course Resources: A list of references, websites, etc. to provide students with additional background information and content. Not required for purchase.

- National Council of Teachers of Mathematics. (2002-present). ON-Math is an online NCTM journal that can be assessed on the web by all NCTM members at www.nctm.org/publications/onmath.

COURSE CALENDAR

The instructor reserves the right to change the syllabus at any time to fit the needs of the students.

<table>
<thead>
<tr>
<th>Sessions</th>
<th>Dates</th>
<th>Topics</th>
<th>Assignments Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5/31</td>
<td>Introductions&lt;br&gt;Syllabus and Course Expectations&lt;br&gt;Components of an Effective Lesson&lt;br&gt;APA Writing&lt;br&gt;Teaching Mathematics in the Era of the NCTM Standards - Chapter 1</td>
<td>Syllabus Review</td>
</tr>
<tr>
<td>2</td>
<td>6/5</td>
<td>Exploring What It Means to Know and Do Mathematics – Chapter 2</td>
<td>Chapter 1 and 2 Reflections Due</td>
</tr>
<tr>
<td>3</td>
<td>6/7</td>
<td>Teaching Through Problem Solving – Chapter 3&lt;br&gt;- Math Annotated Bibliography Assignment</td>
<td>Chapter 3 Reflection Due</td>
</tr>
<tr>
<td>4</td>
<td>6/12</td>
<td>Planning in the Problem-Based Classroom - Chapter 4</td>
<td>Chapter 4 Reflection Due&lt;br&gt;Math Annotated Bibliography Due</td>
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| 5 | 6/14 | Building Assessment into Instruction – Chapter 5  
Teaching Math Equitably to All Children – Chapter 6  
Reflective/Foldable Activity Assignment Discussion | Chapters 5 & 6 Reflection Due |
| 6 | 6/19 | Using Technology to Teach Mathematics – Chapter 7  
Early Number Concepts/Number Sense – Chapter 8  
Laptop needed | Chapter 7 Reflection Due  
Chapter 8 Reflection Due  
Reflective/Foldable Activity Due |
| 7 | 6/21 | Meanings for the Operations – Chapter 9  
Helping Children Master the Basic Facts – Chapter 10  
• Mid-Term: Problem Solving Presentations | Chapter 9 Reflection Due  
Chapter 10 Reflection Due |
| 8 | 6/26 | Whole-Number Place-Value Concepts – Chapter 11  
Strategies for Whole-Number Concepts – Chapter 12 | Chapter 11 Reflection Due  
Chapter 12 Reflection Due  
Mid-Term: Problem Solving Presentations |
| 9 | 6/28 | Using Computational Estimation with Whole Numbers – Chapter 13  
Algebraic Thinking: Generalizations, Patterns, and Functions – Chapter 1 | Chapter 13 Reflection Due  
Chapter 14 Reflection Due  
Mid-Term: Problem Solving Presentations Continue |
| 10 | 7/3 | No Class | Chapter 15 Online Reflection Due  
Chapter 16 Online Reflection Due |
| 11 | 7/5 | Fraction Concepts – Chapter 15  
Strategies for Fraction Computation – Chap. 16 | |
| 12 | 7/10 | Decimals and Percent – Chapter 17  
Proportional Reasoning – Chapter 18 | Chapter 17 Reflection Due  
Chapter 18 Reflection Due |
| 13 | 7/12 | Measurement Concepts – Chapter 19  
Geometric Thinking/Geometric Concepts – Chapter 20  
Components of an Effective Lesson Presentations | Chapter 19 Reflection Due  
Chapter 20 Reflection Due |
| 14 | 7/17 | Data Analysis – Chapter 21 | Chapter 21 Reflection Due |
| 15 | 7/19 | Exploring Concepts of Probability- Chapter 22/23  
Components of an Effective Lesson Presentations | Chapter 22/23 Reflection Due  
Components of an Effective Lesson Presentations |
| 16 | 7/24 | Components of an Effective Lesson Presentations | Components of an Effective Lesson Presentations |
| 17 | 7/26 | Number Talks  
Final Unit Portfolio Sharing Closing | Final Unit Presentations/Portfolios |