EDME 377 577-01 Early Childhood Math and Science Methods

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XAVIER UNIVERSITY MONTESSORI EDUCATION PROGRAM
Spring 2015

COURSE TITLE & EDME 377/577-01 Early Childhood Math and Science Methods
CATALOG NO:
CREDIT HOURS: 3 credit hours
LOCATION: Joseph Building, Room 113
TIME: Thursday, 5:00 pm-8:30 p.m.
INSTRUCTOR: Kathy Farfsing, M.Ed, (c) 513-257-1692, farfsingk@xavier.edu
OFFICE INFORMATION: 301 Joseph, 745-3424
OFFICE HOURS: by appointment

Mission Statement for the Department of Childhood Education and Literacy

Xavier University’s Department of Childhood Education and Literacy is dedicated to the pursuit of knowledge and to the orderly discussion of critical issues confronting educators in a free, inquiry-based environment committed to current and relevant scholarship and research related to our profession. Xavier University seeks to create awareness of social justice in all disciplines through its emphasis on living the Jesuit tradition of intellectual, moral, and spiritual preparation. The candidates in the Early Childhood, Middle Childhood, Montessori and Literacy programs, through their academic and professional training, are prepared to value the lives of children regardless of racial, linguistic, socio-economic, religious, or ethnic background and to work with and value family and school structures in both urban, rural, and suburban settings. Special attention is given to developmentally effective practices and advocacy for all children, with ethical issues and values as expressed through the Jesuit tradition. Thus, the Childhood Education and Literacy preparation at Xavier University strives to send out into the education community candidates who are morally sensitive to the academic and social needs of our time, foster an appreciation for human diversity, reason critically, and think creatively. Candidates in the Childhood Education and Literacy Department are encouraged to develop and maintain a disposition toward lifelong learning in the profession of education and to the service of their students and their students’ families and communities.

How Course Content Connects to the Mission Statement for Department of Childhood Education & Literacy

The assignments and activities in this course support the mission statement of the Department of Childhood Education & Literacy by including class discussions, lesson presentations and visits to different school settings for observation, reflection, field experience, and practice time. During the course of this class candidates will create developmentally appropriate Math and Science materials that demonstrate knowledge, application, and analysis of skills as well as design lesson activities that appeal to the developmental skills of the young child through creative process and the visual arts. Candidates will also provide a written rationale paper and album that reflects the academic, moral, spiritual, and social development of the young child including the importance of families, communities, teachers, cultural appreciation and the prepared learning environment.
OBJECTIVES AND COMPETENCIES TO BE ACHIEVED:

GENERAL STATEMENT OF PURPOSE

• To gain an understanding of the Early Childhood Math and Science Methodology and the lessons and materials that support as well as honor the unique development of the child.

SKILL OBJECTIVES AND COURSE GOALS

• To learn the methodology, rationale, scope and sequence of the Math and Science areas of the Montessori classroom.
• To learn how to present a variety of Math and Science materials to 2 ½ -6 year old children.
• To develop skills in preparing the environment and creating lessons in the Math and Science areas that are appealing and developmentally appropriate for the 2 ½ -6 year old age range.
• To learn to incorporate the visual arts and other creative processes into the curricula areas of Math and Science.
• To gain an understanding of the natural development of the child including the domains of physical, social, cognitive, and emotional development as well as the “sensitive periods” of learning as described by Dr. Maria Montessori.
• To be a strong advocate for the rights and needs of children.

ATTITUDES/VALUES/DISPOSITIONS

• Respect for the child and his/her culture
• Respect for self
• Respect for the learning environment

METHODOLOGY

• Presentation of materials
• Practice creating and presenting materials
• Lectures
• Guest speakers
• Reading/writing assignments
• Field experience

EXPECTATIONS

• Attendance and punctuality
• Professionalism
• Effective use of class and practice time, including participation in group experiences.
• Individual and original work on all assignments
• Follow departmental guidelines regarding class absences and late/missing assignments

TEXTBOOKS:

Dr. Montessori's Own Handbook, Montessori
The Montessori Method, Montessori
The Discovery of the Child, Montessori
The Secrets of Childhood, Montessori
The Absorbent Mind, Montessori
MACTE Competencies (The MACTE Accreditation Handbook, Section 3, page 50)

1. Montessori Philosophy and Human Development
   a. demonstrates an understanding of and implements Montessori philosophy with a focus on the early childhood years; (Assessment: Candidates will develop, practice, and be graded on Math and Science lessons and practices)
   b. comprehends and utilizes an understanding of the stages of human growth, development, and educational theories with an emphasis from two and one-half (2 ½) through six (6) years of age; (Assessment: Candidates will turn in two written rationale papers and take two practicum exams), (Assessment: Graduate presentation)
   c. demonstrates evidence of personal growth through self-evaluation and introspection; (Assessment: Candidates will participate in readings and reflections)

2. Classroom Leadership
   a. demonstrates observation, documentation, and analytical skills necessary for planning and recording the progress of children; (Assessment: Candidates will submit a written observation and reflection based on field experiences)
   b. utilizes cultural sensitivity in support of the development of individual children; (Assessment: Candidates will create and present lessons in Math and Science that support the cultural sensitivities and development of children)
   c. demonstrates an ability to implement effective classroom strategies; (Assessment: Candidates will create and present lessons in Math and Science that support the cultural sensitivities and development of children)

3. Curriculum Implementation
   a. demonstrates the principles of Montessori environmental and material design; (Assessment: Candidates will create and present lessons in Math and Science)
   b. articulates the rationale and sequence of the Montessori curriculum; (Assessment: Candidates will submit two Rationale papers, one in Math and the other in Science)
   c. demonstrates proficiency in applying Montessori principles in the context of the curriculum, didactic materials, and lesson presentations; (Assessment: Candidates will take two practicum exams, one in Math and the other in Science, and submit albums accordingly)
   d. utilizes a variety of instructional strategies and assessment methods; (Assessment: Candidates will use field experience work to practice and reflect on strategies)

4. Community Involvement and Partnership with Families
   identifies and has an awareness of available professional associations (Assessment: Candidate will submit articles and reflections for review and discussion)

NAEYC STANDARDS

Standard 1-Promoting Child Development and Learning
1a-knowing and understanding young children’s characteristics and needs (Assessment: Candidates will turn in two written rationale papers and take two practicum exams), (Assessment: Graduate presentation)
1b-knowing and understanding the multiple influences on development and learning (Assessment: Candidates will turn in two rationale papers, one for Math and the other for Science)
1c-use developmental knowledge to create healthy, respectful, supportive, and challenging learning environments. (Assessment-Candidates will create and prepare lessons for presentations and review)

Standard 2-Building Family and Community Relationships
2a-Knowing about and understanding family and community characteristics (Assessment-Candidates will use field experience to work with a diverse population of children)
2b-Supporting and empowering families and communities through respectful, reciprocal relationships. (Assessment-Candidate Disposition Report and field experience in neighboring schools)
2d-demonstrates leadership skills and an understanding of professional standards (Assessment: Candidate Disposition Report)

Standard 3-Observing, Documenting, and Assessing to support Young Children and Families
3a-Understanding the goals, benefits, and uses of assessments (Assessment-Candidates will be required in field experience to teach and record results of their instruction)
3b-Knowing about assessment partnerships with families and other professionals. (Assessment-Candidates will be required in field experience to teach and record results of their instruction)
3c-Knowing about and using observation, documentation, and other appropriate assessment tools and approaches. (Assessment-Candidates will submit two rationale papers and participate in field experience)
3d-Understanding and practicing responsible assessment to promote positive outcomes for each child. (Assessment: Candidates will write and reflect on extensions and variations in lesson plan writing)

(Standard 4-Using Developmentally Effective Approaches to Connect with Children and Families
4b-Knowing and understanding appropriate effective strategies and tools for early education (Assessment-Candidates will write lesson plans addressing aims and objectives)

Standard 5-Using Content Knowledge to Build Meaningful Curriculum
5a-Understanding content knowledge and resources in academic disciplines. (Assessment-Candidate will write two rationale papers, lessons plans, and participate in two practicum exams.)
5b-Knowing and using the central concepts, inquiry tools, and structures of content areas or academic disciplines. (Assessment-Candidate will submit written lesson plans and Albums)
5c-Using their own knowledge, appropriate early learning standards, and other resources to design, implement, and evaluate meaningful, challenging curricula for each child. (Assessment-Candidate will write lesson plans, write two Rationale papers, and participate in two practicum exams)

Standard 6-Becoming a Professional
6a-Identifying and involving oneself with the early childhood field. (Assessment: Candidate will write rationale papers and reflections on field experiences)
6b-Knowing about and upholding ethical standards and professional guidelines. (Assessment: Candidate Disposition report)

OHIO STANDARDS of the TEACHING PROFESSION

1 Teachers understand student learning and development and respect the diversity of the students they teach.
   - Teachers display knowledge of how students learn and of the developmental characteristics of age groups.
   - Teachers understand what students know and are able to do and use this knowledge to meet the needs of all students.
   - Teachers expect that all students will achieve to their full potential.
   - Teachers model respect for students’ diverse cultures, language skills and experiences.
   - Teachers recognize characteristics of gifted students, students with disabilities and at-risk students in order to assist in appropriate identification, instruction and intervention.
2 Teachers know and understand the content area for which they have instructional responsibility.
• Teachers know the content they teach and use their knowledge of content-area concepts, assumptions
and skills to plan instruction.
• Teachers understand and use content-specific instructional strategies to effectively teach the central
concepts and skills of the discipline.
• Teachers understand school and district curriculum priorities and the Ohio academic content
standards.
• Teachers understand the relationship of knowledge within the discipline to other content areas.
• Teachers connect content to relevant life experiences and career opportunities.

3 Teachers understand and use varied assessments to inform instruction, evaluate and ensure student
learning.
• Teachers are knowledgeable about assessment types, their purposes and the data they generate.
• Teachers select, develop and use a variety of diagnostic, formative and summative assessments.
• Teachers analyze data to monitor student progress and learning, and to plan, differentiate and modify
instruction.
• Teachers collaborate and communicate student progress with students, parents and colleagues.
• Teachers involve learners in self-assessment and goal setting to address gaps between performance
and potential.

4 Teachers plan and deliver effective instruction that advances the learning of each individual student.
• Teachers align their instructional goals and activities with school and district priorities and
Ohio’s academic content standards and performance to plan and deliver instruction that will close the
achievement gap.
• Teachers communicate clear learning goals and explicitly link learning activities to those defined
goals.
• Teachers apply knowledge of how students think and learn to instructional design and delivery.
• Teachers differentiate instruction to support the learning needs of all students, including students
identified as gifted, students with disabilities and at-risk students.
• Teachers create and select activities that are designed to help students develop as independent
learners and complex problem-solvers.
• Teachers use resources effectively, including technology, to enhance student learning.

5 Teachers create learning environments that promote high levels of learning and achievement for all
students.
• Teachers treat all students fairly and establish an environment that is respectful, supportive and
caring.
• Teachers create an environment that is physically and emotionally safe.
• Teachers motivate students to work productively and assume responsibility for their own learning.
• Teachers create learning situations in which students work independently, collaboratively and/or as a
whole class.
• Teachers maintain an environment that is conducive to learning for all students.

6 Teachers collaborate and communicate with students, parents, other educators, administrators and the
community to support student learning.
• Teachers communicate clearly and effectively.
• Teachers share responsibility with parents and caregivers to support student learning, emotional and
physical development and mental health.
• Teachers collaborate effectively with other teachers, administrators and school and district staff.
• Teachers collaborate effectively with the local community and community agencies, when and where appropriate, to promote a positive environment for student learning.

Teachers assume responsibility for professional growth, performance and involvement as an individual and as a member of a learning community.
• Teachers understand, uphold and follow professional ethics, policies and legal codes of professional conduct.
• Teachers take responsibility for engaging in continuous, purposeful professional development.
• Teachers are agents of change who seek opportunities to positively impact teaching quality, school improvements and student achievement.

Academic Support:

Learning Assistance Center - The Learning Assistance Center (LAC) provides support services to facilitate learning. The LAC has two main purposes: tutoring and disability services. The tutoring services include subject specific tutoring, drop-in sessions, study skills assistance, and Supplemental Instruction (SI). For students with documented disabilities, services include accommodations such as extended time on exams, reduced distraction testing environment, note-taking assistance, and assistive technology. Services are provided in a positive and encouraging environment, which promotes appreciation for diversity and cura personalis. Students in an online course can contact the LAC at (513) 745-3280 to set up an appointment. The LAC is located in the Conaton Learning Commons room 514. [http://www.xavier.edu/lac](http://www.xavier.edu/lac)

Writing Center - The Writing Center offers free one-on-one tutoring on writing assignments for all Xavier students. Students in an online course can contact the Center at (513) 745-2875 to set up an appointment. Sessions can be conducted in multiple ways, including discussions by phone and by email at writingcenter@xavier.edu. The Writing Center is located in the Conaton Learning Commons room 400. [http://www.xavier.edu/writingcenter/](http://www.xavier.edu/writingcenter/)

Mathematics Tutoring Lab - The Mathematics Tutoring Lab offers mathematics tutoring for all Xavier students. Students in an online course can contact the Lab at (513) 745-3069 to set up an appointment. The Mathematics Tutoring Lab is located in the Conaton Learning Commons room 419. [http://www.xavier.edu/mathematics/Math-Lab.cfm](http://www.xavier.edu/mathematics/Math-Lab.cfm)
Expectations for Adults Sharing the Montessori Environment

1. Wash hands before entering the classrooms!

2. The Montessori environment is sensitive to the needs of our children with allergies. **Please do not bring in any items that may contain peanuts or traces of nuts.**

3. Doors must remain locked at all times; this includes before, during, and after class. Children are still on premises until 5:30. Please check that all doors are locked as the last person leaves. This ensures the safety of adult and young students.

4. Please be sensitive to returning all chairs and tables to their proper positions. (The Maintenance crew appreciates it if chairs are put on top of tables in the evening).

5. Check that all windows are closed before you leave.

6. Do not leave food in the refrigerator or on the counter after class hours.

7. Check to see the coffeepot and stove are off and the kitchen is clean.

8. Food and drinks are permitted **only** in the kitchen and hallways. Please do not take anything onto the carpeted area of the classroom.

9. Please use adult sized chairs (found in the Lab School atrium or the blue chairs in the elementary hall) and return them neatly. Tables are for work only. They are not designed to be used as chairs.

10. All materials must be returned to their proper place. Please use only one material at a time.

11. Clean all tables (in classrooms and at snack) with antibacterial wipes when class is over.

12. In the event of practice time in the classroom off hours, please use the key to the Lab School located in the library. It is best to call Campus Police to make them aware of your practice in the classroom by calling 745-1000. Please lock all doors and windows when finished and return key.
Calendar

January 15  Course syllabi
Assignments/Practice Log/Participation
Lesson Plans
Album Requirements
Field Experience
Differentiation

Due January 22: Read and write a reflection on The Mathematical Mind by Shannon Helfrich.

January 22  Math Philosophy
Introduction to Numbers

Due January 22: Lesson plans- Spindle Boxes & Numeral and Counters

January 29  Decimal System
Begin Linear Counting

Due February 5: Lesson plans-Building Tray; Number Composition; Ten Board

February 5  Finish Linear Counting
Process of Addition

Due February 12: Lesson plans-Five Cube Chain; Dynamic Addition w/GB; Dynamic Addition w/Stamp Game

February 12  Memorization

Due February 19: Math Rationale Paper; Lesson Plan: Addition with Number Rods

February 19  Multiplication

Due February 26: Lesson plans- Multiplication with the GB; Multiplication Board

February 26  Subtraction

Due March 12: Lesson plans- Subtraction with Stamp Game; Math w/Children’s Literature

March 5  Spring Break- No classes

March 12  Present Math with Children’s Literature
Division and Fractions

Due March 19: Division with GB

**Optional: Tuesday, March 17
Speaker- Joyce Pickering, AMS President and renowned expert on Montessori and Orton-Gillingham
5 PM (location TBA)
March 19  Math Sequence
          Practice and Review

Due March 26: Math Album & prepare for Math Exam

March 26  Math Exams

Due April 9: Read and write a reflection, topic science (TBA); Graduate Math Presentation

April 2    Easter Holiday- No classes

April 9    Graduate Math Presentation
          Science Philosophy and Overview
          Circle Time Activities

Due April 16: Circle Time Activity

April 16   Circle Time Activity Presentations
          Zoology

Due April 23: Philosophy of Science Paper; Field Experience Forms

April 23   Botany

Due April 30: Science Presentations

April 30   Science Presentations
          Physical Science

Due May 7: Science Albums

May 7      Science Scope and Sequence
ASSIGNMENTS

EARLY CHILDHOOD METHODS ALBUMS

ALBUM GRADES:  
1. All lesson plans submitted for review when due;  
2. All lesson plans properly corrected and typed;  
3. Contains all necessary content, as previously listed;  
4. All additional information properly arranged;  

Album carefully put together; neat; user friendly; aesthetic

LESSON PLANS:  
1. Lesson plans: must be typed, clearly written, step-by-step, detailed explanations (so that a teacher could perform the lesson by reading the presentation)  
2. Lesson plans are to be completed and finished products when submitted;  
3. Lesson plans are to be submitted for review, due each class from the preceding class;  
4. Lesson plans marked “Resubmit” should be resubmitted for review the following class, with corrections made;  
5. Comments from earlier lesson plans are expected to be incorporated in later lesson plans.

ALBUM CONTENT:  
1. Cover, title of album, your name (please include your name on both the front cover and the spine of your album);  
2. Title page: name, address, telephone number must be included;  
3. Table of contents;  
4. Rationale paper with corrections made, at the beginning of album, with its own tab;  
5. Tabs: minimum = 1 for each major heading on Table of Contents, plus additional tabs for any section with multiple sub-headings;  
6. Lesson plans: Final drafts, retyped with ALL changes/corrections made; include all original drafts of lesson plans in the front pocket of the album;  
7. All supplementary information, properly arranged in appropriate sections;  
8. Additional Resources: Must include class handouts and at least 3 additional resources of your own contribution related to the topic.  
9. Plastic page protectors should be used.

STANDARD DEDUCTIONS:  
1. 1 point per class for lateness in submitting lesson plans for review; lesson plans marked “resubmit” should be returned for review the following class;  
2. 1 point for each missing lesson plan;  
3. Lesson corrections not made;  
4. Sloppiness; disorganization including tabs;  
5. Missing requirements, such as additional resources or title page.
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MATH RATIONALE PAPER: 15 points

Must be typed in a readable font, size 12, and double spaced;
1. Must contain correct grammar, spelling, and punctuation;
2. Rationale papers must include at least 4 quotes from Dr. Montessori’s writings, taken from at least two primary sources, using APA style for citation;
3. Reference page- use APA style for list of works cited;
4. Grades will be based on content, organization, mechanics, and appropriate referencing (APA style).
5. Rationales must be included in your Math album, as well as in your Philosophy album

Content: The paper should be a comprehensive discussion of the aims of the Math (given in class and discussed in Montessori texts). You may quote or summarize class notes and/or Dr. Montessori’s own words, but you must also further explain each aim in your own words. Offer examples to bring your thoughts to life.

The following is a list of points which should be discussed within your paper. You may include other ideas or information as well, but be sure to include the following:

- Discuss the rationale/philosophy of the Math area in the early childhood Montessori setting, respectively.
- Discuss the “Sensitive Periods” in the range of child development and its importance in the developing child.
- Relate Math to the nature of the child and how it supports the child’s spiritual, cognitive, physical and social growth.
- Discuss the material and lessons of Math and their aims. Include the rationale for the sequence of materials and the sub areas of each curricula
- Discuss the importance of the Prepared environment and how it cultivates and supports the holistic education of the child
- Discuss in what ways the experiences in Math prepare the child for other aspects of learning, how they scaffold and build upon one another.
- Describe the importance of a varied Math curriculum which evolves throughout the child’s 3 year Montessori experience and give examples.

MATH ACTIVITY CONNECTED TO CHILDREN’S LITERATURE: 15 points

1. Choose a quality piece of children’s literature.
2. Create a math activity related to the book.
3. The activity must be reflective of an age-appropriate skill for a 3-6 classroom.
4. The activity must be reflective of the Montessori philosophy; for example, it may be a variation or extension of a Montessori material from your album.
5. Write a detailed lesson plan using the below format and including all points. Include a hard copy.
6. Student is responsible for sharing their lesson plan with their colleagues either by email or they may bring copies to class.

Lesson Plan Format for Math Activity Connected to Children’s Literature
Consider what standards you are working through and align the objectives/standard/assessment

1. title; .5
2. objectives; 1.0
3. materials; .5
4. previous learning/context of lesson 1.0
5. standard-common core and model curriculum, via the ODE website 1.0
6. grade level/age of students; .5
7. procedures; 1.0
8. follow-up activities and extensions/variations; 1.0
9. differentiated learning-2 points-2 descriptions of how to differentiate instruction and assessment
10. higher level thinking questions-2 points-1 question from each of the levels of Bloom’s taxonomy (higher level thinking questioning method-Kagan strategies, Marzano) questions included as a means of assessment
11. Rubric with a description of how students will be assessed. Consider what standards you are working through and align the objectives/standard/assessment 1.0
10. Bibliography – Cite all books, websites, or other references utilized to create this lesson plan. .5

Common Core Standards
You may download a copy of the Common Core Standards at http://www.corestandards.org/Math

CIRCLE TIME ACTIVITY: 10 points

1. Create a circle time activity that will address either Math or Science skills.
2. The activity must be appropriate for a 3-6 classroom. Keep in mind the developmental needs of the students, including the appropriate length of time for the activity, student participation and movement.
3. Write a detailed explanation of the activity, which will be shared with your classmates. This must include your name, name of the circle time activity, area of curriculum, skills addressed, materials needed and detailed and sequential explanation of the activity. Include the Common Core Standards addressed.
4. Bring the write up to class. Copies for your colleagues may be shared via email or bring in copies for each of your colleagues.

PHILOSOPHY OF SCIENCE: 10 points

1. Write an explanation of the philosophy of the Early Childhood Science Curriculum.
2. This may be done in a narrative or bulleted format.
3. It should include the rationale of the science materials, lessons and sequence.
4. This should be included in your Science album and Philosophy album.
SCIENCE LESSON PLAN PRESENTATION:

1. Create three science materials, one from each area—zoology, botany, and physical science.
2. Each activity must be reflective of an age-appropriate skill for a 3-6 classroom.
3. The activity must be reflective of the Montessori philosophy: for example, it may be a variation or extension of Montessori material from your Science album.
4. Write a detailed lesson plan, which will be shared with classmates, for each of your science activities; this must include your name, the name of your science activity, all necessary materials, prior learning, etc. (refer to lesson plan format).

PARTICIPATION AND READINGS:

In our continued efforts of learning and assimilating information into our practice as Montessorians, it is in professional readings and reflections that we can understand more fully the philosophy, methodology, and spiritual tenet that is Montessori education.

- Professional readings will be assigned throughout the course and discussed during class.
- You may be responsible for responding to one or more of these readings by writing a reflection or by posting your reflections to our Discussion board on Canvas.

GRADUATE PRESENTATION:

Articulating and explaining the area of Math is important, particularly as it relates and supports higher cognitive learning processes in early childhood. For this project, you will work together to set up the Math materials in proper sequence and be prepared to discuss: how these materials support higher concepts of learning; some of the aims and how they correlate to benchmarks and standards (1 or 2 examples); how the spirituality of the is child nurtured and nourished in these areas; and how the materials relate in the areas of child development and sensitive periods.

MATH FIELD EXPERIENCE:

The Rationale for this assignment is to provide students with an in-depth learning experience with children who are using the materials demonstrated and practiced in class. This assignment provides you the opportunity to observe children in their Montessori setting, present lessons, and record the varied ways in which children interact with these materials. A total of 10 hours of field work is required.

Kathy Farfsing will contact you regarding your field experience assignment. Spend the first hour of your visit observing the classroom and include some time before or after your observation to ask/discuss questions about the environment with the teacher. The majority of these hours need to be spent working with a student/students on math-related work. It would be ideal to observe the children with whom you will be working; or choose a few children whose activity with math interests you.
In preparation for this experience, you should make arrangements to spend a 2 ½ **hour block** in a classroom (4 visits). A week beforehand, remind the classroom teacher you will be observing and ask if they can let you know what materials you should be prepared to present.

**In the interest of professionalism and conduct please arrive on time, dressed appropriately, and prepared to observe and present lessons.**

Write-up your observation as follows:

- Use a descriptive format. Simply describe what you see; withhold your evaluative comments. Be as clear and explicit in your description as possible. (How is the child handling the material? What is s/he saying? Etc.) Note the reflection paper write up for specific reference points.

Include what this experience was like for the child and you, as the presenter. Did the lesson meet the direct and indirect aims? Why or why not? Please share any insights you have gained regarding previous learning or lesson readiness based on this interaction and your observations.

Remember to have the teacher sign the attached form. Type up your observation and at the bottom you can list any questions or comments you had about your observations. Then, answer the questions from the attached sheet and reflect on your work with the children. This should also be typed and reflect thought and insight. **The attached sheet with the teacher’s signature will be separate from your reflection; please do not answer questions directly on this form.**

**Be sure to write a thank you note to the room that you visited!**

*Field experience hours may be applied to your practice log.*

**PRACTICE LOG/TIME:**

Practice time will be held throughout the term. Student proficiency with materials will be assessed during practice time. It is understood, and expected, that students will commit to practice time outside of class hours as well. Student should complete a minimum of 12.5 practice hours. The field experience time that you are actually using the materials can be applied to your log.
## EXPECTATIONS, ASSIGNMENTS, & GRADES

### ASSIGNMENTS:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Undergraduate</th>
<th>Graduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Math Rationale paper</td>
<td>15 points</td>
<td>15 points</td>
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<tr>
<td>2. Math Field Experience</td>
<td>15 points</td>
<td>15 points</td>
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<tr>
<td>3. Math Album</td>
<td>20 points</td>
<td>20 points</td>
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<td>4. Math Exam</td>
<td>15 points</td>
<td>15 points</td>
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<tr>
<td>5. Math Children’s Literature Activity</td>
<td>15 points</td>
<td>15 points</td>
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<td>6. Science Philosophy Paper</td>
<td>10 points</td>
<td>10 points</td>
</tr>
<tr>
<td>7. Science Lesson Plan Presentation</td>
<td>15 points</td>
<td>15 points</td>
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<td>8. Science Album</td>
<td>15 points</td>
<td>15 points</td>
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<tr>
<td>10. Circle Time Activity</td>
<td>10 points</td>
<td>10 points</td>
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<tr>
<td>11. Practice Log/Time</td>
<td>10 points</td>
<td>10 points</td>
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<tr>
<td>12. Participation and Readings</td>
<td>10 points</td>
<td>5 points</td>
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<tr>
<td>13. Graduate Presentation</td>
<td></td>
<td>5 points</td>
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</tbody>
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**Total** 150 points  150 points

### GRADES: Grades will be based on:

1. Assignments (listed above)
2. Attendance & punctuality (Missing more than one class and/or consistent tardiness not permitted)
3. Participation, practice time/log and effective use of class time
4. All Montessori majors who receive a B or lower must meet with the Montessori program director, Ms. Gina Lofquist

### Graduate and Undergraduate Grades

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>97 – 100 = A</td>
<td>145 – 150 pts.</td>
</tr>
<tr>
<td>93-96 = A-</td>
<td>139 – 144 pts.</td>
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<tr>
<td>90 – 92 = B+</td>
<td>135 – 138 pts.</td>
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<tr>
<td>87 – 89 = B</td>
<td>130 – 134 pts.</td>
</tr>
<tr>
<td>84 – 86 = B-</td>
<td>126 – 129 pts.</td>
</tr>
<tr>
<td>81 – 83 = C+</td>
<td>121 – 125 pts.</td>
</tr>
<tr>
<td>74 or below = F</td>
<td>111 or less pts.</td>
</tr>
</tbody>
</table>
Name: _______________________________________________________________

Date: _______________________________________________________________

Teacher’s signature: ________________________________________________

Course name: _______________________________________________________

Name of material/presentation: _________________________________________

Objective of the presentation: _________________________________________

Describe the presentation: ____________________________________________

How did the language of your presentation establish connections between a previous lessons and experiences with this presentation? List your pre-assessment questions:

How did you incorporate academic language into your presentation? What academic language did you identify for this lesson and how did you incorporate it into this lesson?

How did this lesson engage your students? How were you able to expand student thinking through questioning or discussion?

Determine the child’s outcomes: meets expectations exceeds expectations making progress reteach

How were you able to utilize the three period lesson to determine and assess outcomes?

How were outcomes determined? How will your assessments support your knowledge of students’ conceptual and/or content understanding?

What post assessment questions were used?

Follow up/next presentations:

Recommendations:
Writing is a key experience for candidates. Our goal is to lead candidates to the idea that in order to become a professional one must engage in research-based writing. Students will write about theory and current trends in Early Childhood Education. They will do reflective writing in their intern journal and observation class. They will learn how to write conference reports for parents and for other professionals. Candidate’s written ability is a model for their students. A key disposition is to respect the work of others and to carefully credit all sources used in the final paper.

Check one: Research-based Paper   Creative Idea Paper   Journal

<table>
<thead>
<tr>
<th>Check one:</th>
<th>Research-based Paper</th>
<th>Creative Idea Paper</th>
<th>Journal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflection</td>
<td>Conference Report or IEP</td>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Please make comments where necessary.</th>
<th>(.05) Does Not Meet Expectations</th>
<th>(1) Meets Expectations</th>
<th>(1.5) Exceeds Expectations</th>
<th>Does Not Apply to this Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citations are carefully and correctly documented.</td>
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<tr>
<td>Paper reflects an understanding of the nature of the child and sensitive periods for learning</td>
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<tr>
<td>The mechanics follow the rules of grammar and spelling.</td>
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<tr>
<td>The reader can follow the ideas of the writer.</td>
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<tr>
<td>The content shows that the writer understands the issue, is clear about the issue, and documents findings with current education theory and research.</td>
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<tr>
<td>The paper is organized in both content and sequence.</td>
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<tr>
<td>The candidate’s reflections show a clear understanding of good Early Childhood practices.</td>
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<tr>
<td>The professional report reflects a clear understanding of assessment. It uses correct terms in describing the student.</td>
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<tr>
<td>Bibliography shows that recent research is included in the paper.</td>
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<tr>
<td>To your knowledge paper is original work</td>
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</tbody>
</table>

Signature of person filling out this form ____________________________
Date ____________________________
Total Points __________
ALBUM EVALUATION

NAME OF CURRICULUM AREA EVALUATED: ______________________________________

Candidate’s name: ___________________________ Date: __________________

Contents:

_____ Cover with title of album and student name; name on spine of album
_____ Title page with: Name, address, and phone number
_____ Table of Contents
_____ Rationale Paper, included with corrections made
_____ Additional Resources: class handouts and at least three additional student-added resources

Tabs:

_____ Rationale
_____ Additional Resources
_____ Each major heading
_____ Additional tabs – multiple sub-headings

Lesson Plans:

_____ Typed and clearly written
_____ Submitted on time for review, resubmitted as needed
_____ All corrections made
_____ Original drafts in the front pocket of album

Overall:

_____ Neatness/Aesthetic
_____ User friendly

Total Possible Points: 20

FINAL GRADE: __________
EDME 377/577-01 Early Childhood Math and Science Methods
Kathy Farfsing, M.Ed                      Spring 2015

Practicum Exam

EARLY CHILDHOOD METHODS COURSE

NAME: ______________________________________ DATE: _________________

AREA OF CURRICULUM:______________________________________________

MATERIAL: ___________________________________________________________

- Preparation of material

- Poise, composure, and grace through presentation

- Accuracy, sequencing, and pacing of presentation

- Use of language during presentation

- Knowledge of material (previous learning, aims, what lessons would follow)

Total Possible Points:  15

FINAL GRADE:_________
Public speaking is a key experience for candidates. Our goal is to lead candidates to a leadership role in the school, community, and professional organizations. We begin by having students give oral reports in classes, presenting information at parent meetings, and eventually presenting at a professional conference. The candidate’s ability to clearly express the information and to use correct grammar is a model for students. One of the keys of Early Literacy is auditory discrimination: students need to have excellent models in their environment.

Check one: Class Presentation   Parent Meeting   Professional Meeting   Other   

<table>
<thead>
<tr>
<th>Please make comments where necessary.</th>
<th>(.25) Does Not Meet Expectations</th>
<th>(.50) Meets Expectations</th>
<th>(1) Exceeds Expectations</th>
<th>Does Not Apply to this Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidate presents a clear and organized speech.</td>
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<td>Candidate uses correct grammar.</td>
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<td>Candidate projects his/her voice for people to hear the information.</td>
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<td>The content indicates that the candidate understands the information being presented.</td>
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<tr>
<td>Uses technology as part of presentation or other appropriate visual material.</td>
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<td>Candidate can answer questions about the presentation.</td>
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<td>Candidate’s presentation is appropriate for this situation.</td>
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<tr>
<td>Candidate shows respect toward other presenters during this class.</td>
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<tr>
<td>Candidate is composed and articulate through presentation</td>
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<tr>
<td>Candidate appropriates language correctly to address technique, etc.</td>
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</tbody>
</table>

Signature of person filling out this form __________________________________________________________

Date ___________________________
Candidate’s Name (please print) ___________________________________________  
Signature of Candidate ___________________________________________ Date ________  
(Candidate’s signature only indicates that she/he has reviewed this report; it does not imply agreement.)  
Person Completing the Form (please print) ________________________________  
Signature of Person ___________________________________________ Date ________  
Check one: Faculty/Instructor _______ University Supervisor _______ Cooperating Teacher ___  

Please check the appropriate rating for each category using the following scale. Be sure to document a score of 1 or 2 by providing evidence in the comment column. Use back portion for additional comments.  

4=Exemplary  
3=Proficient (meets expectations)  
2=Basic (inconsistently meets expectations)  
1=Unacceptable (does not meet minimal expectations)  
N/A = Not Applicable  

<table>
<thead>
<tr>
<th>COURSE COMPONENT</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>N/A</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidate attends all classes and is punctual.</td>
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<td>Candidate demonstrates respect for the learning community and alternative viewpoints.</td>
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<td>Candidate demonstrates initiative in class discussions and activities.</td>
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<td>Candidate takes responsibility for requirements of the course.</td>
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</table>

<table>
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<tr>
<th>FIELD COMPONENT</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>N/A</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidate demonstrates professionalism in actions, appearance, and demeanor.</td>
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<td>Candidate works well with diverse students.</td>
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<tr>
<td>Candidate collaborates with school professionals during internship and field experience.</td>
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<td>Candidate demonstrates ability to reflect on practice and proactively reacts to constructive criticism.</td>
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<tr>
<td>Candidate is professional in remarks to students and mentor teacher.</td>
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</tbody>
</table>
PRACTICE SHEET

<table>
<thead>
<tr>
<th>Date</th>
<th>Time Frame/ Total</th>
<th>Materials Practiced</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

Total Hours:

Note: Practice time will be held throughout the term. Student proficiency with materials will be assessed during practice time. It is understood, and expected, that students will commit to practice time outside of class hours as well. Student should complete a minimum of 12.5 practice hours.
MONTESSORI CLASS ABSENCE AND GRADE FORM

<table>
<thead>
<tr>
<th>Situation</th>
<th>What happens?</th>
<th>Documented</th>
</tr>
</thead>
<tbody>
<tr>
<td>If you miss more than two classes, in Fall or Spring semester, you must withdraw from the class. If you are absent from an all day Saturday class you are missing two classes.</td>
<td>Candidate is responsible to do an official withdrawal at the registrar’s office.</td>
<td>Practicum Handbook, page 72</td>
</tr>
<tr>
<td>If you miss more than one class in Summer session, you must withdraw from class. If you miss an all day class, you must withdraw.</td>
<td>Candidate is responsible to do an official withdrawal at the registrar’s office.</td>
<td>Practicum Handbook, page 72</td>
</tr>
<tr>
<td>Material class absence</td>
<td>You are responsible for presenting material (without a teaching partner) to the instructor by way of videotape or in person. Failure to fulfill this requirement will result in an automatic grade of C or lower for the course.</td>
<td>Practicum Handbook, page 72</td>
</tr>
<tr>
<td>Lecture class absence</td>
<td>A thorough research paper must be written on the lecture topic. The paper must include a bibliography and follow all standards and procedures for a paper. The instructor decides the length of the paper. Failure to fulfill this requirement will result in an automatic grade of C or lower for the course.</td>
<td>Practicum Handbook, page 72</td>
</tr>
<tr>
<td>Late assignments</td>
<td>Candidates will receive a letter grade below the final grade earned (A, to A-). All late assignments are due the next day. The grade will be lowered one level for each day the assignment is late. It is the candidate’s responsibility to hand-deliver the assignment to the instructor.</td>
<td>Practicum Handbook, page 72</td>
</tr>
<tr>
<td>Fail an Exam</td>
<td>Candidate fails a practical exam, he/she will not gain extra points when the materials are presented at a later date. In order for the candidate to continue in the program, he/she must present the materials to the instructor. If the candidate fails to do this, he/she will receive a failing grade for the course.</td>
<td>Practicum Handbook, page 72</td>
</tr>
<tr>
<td>Failure to complete an assignment</td>
<td>Candidate will lose two letter grades if he/she fails to complete any assignment. (ie. Grade of A will become B). They will also lose assigned points for that assignment.</td>
<td>Practicum Handbook, page 72</td>
</tr>
<tr>
<td>Late for Class</td>
<td>Candidate will lose points for late class arrival. Professionals are expected to be on time. (Bad weather is a valid excuse for late arrival). One point will be deducted for each time you are late.</td>
<td>Practicum Handbook, page 72, Xavier University Catalog, page 48</td>
</tr>
<tr>
<td>Mechanics of Writing</td>
<td>The university requires a high quality of writing. Students can receive instruction at the James E. Glenn Writing Center, Alter Hall, rm B12. Faculty members may refuse to accept an assignment that does not meet acceptable standards.</td>
<td>Xavier University Catalog Page 53, Practicum Handbook, page 72</td>
</tr>
</tbody>
</table>