Course Information:

Course Title: Math and Science in Early Childhood Education
Credits: 3
Class Hours: 3

Course Description:

Covers the standards, principles, and practices in teaching mathematics and science to young children age birth through eight. Emphasis developing an integrated math and science curriculum that includes appropriate content, processes, environment and materials, and child-centered choices. Field experiences required. Prerequisite(s): ECED 2315.

Instructor Information:

Name:
Email:
Office Phone:
Office Location:
Office Hours:

Required Textbook(s) & Other Materials:

Textbook(s):


NOTE: Science readings are linked inside the course shell and no additional textbook is required for this portion of the course.

Once enrolled, all students should verify that they have the correct textbook and materials information by consulting the D2L/NS Online shell for the course. If you are registered with the Access Center and require an alternate format for the textbook and other course materials, please contact the Access Center at 615-353-3721, 615-353-3741, or accesscenter@nscc.edu.
Course Outcomes:
Upon successful completion of this course, students should be able to:

1. Identify learning outcomes for young children in math and science. *(1a, 5c)*
2. Identify standards for math and science instruction and programming in early education settings. *(5c, 6d)*
3. Identify appropriate individual child assessment methods in math and science learning. *(3b)*
4. Discuss how technology can be integrated to support development of math and science in the curriculum. *(4b, 5b, SS5)*
5. Design, implement, and evaluate science inquiry experiences for children in an integrated, research-based curriculum. *(1c, 4b, 4c, 4d, 5a, 5b)*
6. Design, implement, and evaluate math experiences for children that support the development of learning outcomes. *(1c, 4b, 4c, 4d, 5a, 5b)*
7. Identify effective strategies for involving families in supporting math and science for young children. *(2c)*

NAEYC Initial Standards

The AAS Degree in ECED at Nashville State is accredited by the National Association for the Education of Young Children (NAEYC). The following NAEYC Initial Standards for Early Childhood Education Professional Preparation are addressed in this course:

**Standard 1: Promoting Child Development and Learning**
1a. Knowing and understanding young children’s characteristics and needs, from birth through age 8

1c. Using developmental knowledge to create healthy, respectful, supportive, and challenging learning environments for young children.

**Standard 2: Building Family and Community Relationships**
2c. Involving families and communities in young children’s development and learning.

**Standard 3: Observing, Documenting, and Assessing to Support Young Children and Families**
3b. Knowing about and using observation, documentation, and other appropriate assessment tools and approaches, including the use of technology in documentation, assessment, and data collection

**Standard 4: Using Developmentally Effective Approaches**
4b. Knowing and understanding effective strategies and tools for early education, including appropriate uses of technology.

4c. Using a broad repertoire of developmentally appropriate teaching/learning approaches.

4d. Reflecting on own practice to promote positive outcomes for each child.

**Standard 5: Using Content Knowledge to Build Meaningful Curriculum**
5a. Understanding content knowledge and resources in academic disciplines: language and literacy; the arts – music, creative movement, dance, drama, visual arts; mathematics; science, physical activity, physical education, health and safety; and social studies.

5b. Knowing and using central concepts, inquiry tools, and structures of content areas or academic disciplines.

5c. Using own knowledge, appropriate early learning standards, and other resources to design, implement, and evaluate developmentally meaningful and challenging curriculum for each child.

**Standard 6: Becoming a Professional**

6d. Integrating knowledgeable, reflective, and critical perspectives on early education

**Supportive Skills**
Skills in identifying and using professional resources.

**Course Competencies:**

- **Objective 1:** Gaining factual knowledge (terminology, classifications, methods, trends)
- **Objective 2:** Learning fundamental principles, generalizations, or theories
- **Objective 4:** Developing specific skills, competencies, and points of view needed by professionals in the field most closely related to this course

**Topics to Be Covered:**

- Standards & Assessment for Math and Science
- Science Curriculum
  - Science Inquiry
  - Life, Physical, and Earth Science
  - Science Trays
  - Developing In-depth Science Studies
- Mathematics curriculum
  - Number and operations
  - Patterns and Symmetry
  - Measurement
  - Geometry and spatial sense
  - Displaying and Analyzing Data

**Course Assessments:**
The following performance assessments will be used to demonstrate students’ understanding, knowledge, and skills:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Fieldworks/Learning Experiences (20 points each)</td>
<td>80</td>
<td>20%</td>
</tr>
<tr>
<td>2 Book Reviews (10 points each)</td>
<td>20</td>
<td>5%</td>
</tr>
</tbody>
</table>
Grading Policy:

All ECED majors working on a technical certificate or an AAS degree are required to receive a C or above in all ECED classes.

Grades are posted in the Gradebook on NS Online. To see your grades in this format, click on the "Evaluation" tab at the top navigation area of the course and select "Grades". All your grades are visible to you and you can track your progress overall in the course.

It is expected that students follow instructions carefully, study the grading criteria, and ask questions if they do not understand an assignment. For each assignment, you will be required to complete the grading rubric as a self-grading component of the assignment. The purpose of this self-grading is to focus your attention on the expectations for the assignment and enhance your own self-evaluation and critical thinking skills. Completing the rubrics will help you practice self-assessment and identify areas for improvement; these are very important skills for a professional in early education. Even though you may submit a self-scored rubric, the instructor will make the final determination on all grades and scores.

Late Work Policy & Make-up Procedures for Missed Assignments and Work:

Students are encouraged to turn in all assignments on time. In the event that you miss a due date, you may turn in the assignment late, up to one week beyond the due date, but no later. Ten percent (10%) of the points for an assignment will be deducted on late work. No assignments will be accepted more than one week late and no assignment will be accepted beyond the last class date. Late assignments are to be submitted to the Assignment Dropbox. You do not need to notify the instructor about late work; the Dropbox is pre-set to allow late submissions up to one week late. See example below about reduction of points.

EXAMPLE: An assignment worth 100 points is due Feb. 10th. The final date to submit is on Feb. 17th, a week later. If not turned in on Feb. 10th, then it is considered late and will have 10% (10 points) deducted from total score. You have up until Feb. 17th to turn in the assignment, but no later. As for grading, if you turned in late and earned 90, 10 points will be deducted and your final score will be 80.

Assessment and Grading
The following performance assessments will be used to demonstrate students’ understanding, knowledge, and skills:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discover Tray Project</td>
<td>100</td>
<td>25%</td>
</tr>
<tr>
<td>Mathematics Project</td>
<td>100</td>
<td>25%</td>
</tr>
<tr>
<td>2 Exams (50 points each)</td>
<td>100</td>
<td>25%</td>
</tr>
<tr>
<td>Total Points</td>
<td>400</td>
<td>100%</td>
</tr>
</tbody>
</table>
Field Experiences: 3 Hours of required field experience

Students will be engaged in a minimum of 3 hours of field experiences in this course. These hours will include:

1. Fieldwork Assignments – math and science experiences with children
2. Discovery Tray – developing and implementing a discovery tray activity with children

Assessment: Student learning will be assessed through the following:

1. Fieldwork Assignments
2. Book Reviews
3. Discovery Tray Project: develop and present a science discovery tray with children and share in class
4. Mathematics Project: develop a plan for an in-depth math project for preschool age children
5. Exams: complete a mid-term and final exam

SUBMITTING ASSIGNMENTS:
You can turn in assignments one way in this class--- submit online to the Assignment Dropbox by the time class begins on the day the assignment is due. (For example, if class starts at 9:35 am, then your assignment is due at 9:35 am. If turned in after 9:35 am, it is considered late.) If you submit online, your assignment will be graded online and you will have to go online to see your grade and feedback. Assignments cannot be submitted through email; you must use the Assignment Dropbox in the NS Online system.

Attendance Policy/Participation
Students are expected to attend all scheduled classes and laboratories. Absences in a course may affect a student’s final grade. The student is responsible for all assigned work in the course regardless of excused or unexcused absences. Tardiness may also affect a student’s final grade.

In online courses, attendance is signaled by logging on to the D2L/NS Online shell, participating as prompted (e.g., responding to an instructor’s email, posting to a discussion board) and/or completing and submitting assignments. Campus closures do not affect attendance and assignment completion in online courses.

- Students are expected to participate in the course. Participation is defined as: reading assignments, checking email, posting discussion, arriving on time, active class participation, and uploading assignments, etc.
- Students are expected to respond to the instructor’s e-mails.
- Students are expected to contact the instructor with any problems.

This course is one of the required courses in Early Childhood Education programs, meant to prepare you for the professional work of being a teacher. Professional conduct and courtesy is expected at all times, as is giving the instructor or fellow students your full and polite attention. During class students should refrain from doing unrelated work that creates a distraction to the instructor and other students, such as:
• Surfing the Internet, Checking Facebook, Texting, Checking voicemail
• Chatting on the phone or with the person next to you
• Working on your homework
• Sleeping

In this class you are expected to:
• Stay focused on the class activities and be in the present.
• One person speaks at a time. If you have something important to talk to a classmate about, go into the hallway and return once finished.
• Keep cell phones put away.
• Be a positive contributor to our classroom community.

CLASS PROCEDURES
The class will be a mixture of lecture, discussion, in-class activities and class participation. The instructor will make every effort to work with you, but you are expected to read assignments before class, pay attention, participate in class, and put effort into assignments.

Each student is expected to be on time, attend all scheduled classes, and stay for the entire class session. It is not acceptable to walk in and out of class, unless there is an emergency.

An absence is defined as non-attendance for any reason, including illness or emergency.

Absences Allowed: Regular Fall & Spring Semester: No More than 3 absences.
• Coming to class late (after the instructor has taken attendance) and/or leaving early (before the instructor dismisses the class) counts as a tardy. Three (3) tardies count as one (1) absence. Any student arriving more than 30 minutes after class has started or leaving more than 30 minutes before class is dismissed will be considered as absent for the entire class.
• Any student who is absent is responsible for the content of the class missed and any assignments given. The student is encouraged to get notes and information missed from another student in the class.
• In-class assignments cannot be made up.
• The instructor’s grade book serves as the official record for grades and attendance.
• Absences beyond the allowed 3 can result in a failing grade for the course.

Grading Scale:

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Percentage Range</th>
<th>Class Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90 - 100% = A</td>
<td>360 - 400</td>
</tr>
<tr>
<td>B</td>
<td>80 – 89% = B</td>
<td>320 – 359</td>
</tr>
<tr>
<td>C</td>
<td>70 – 79% = C</td>
<td>280 – 319</td>
</tr>
<tr>
<td>D</td>
<td>60 – 69% = D</td>
<td>240 – 279</td>
</tr>
<tr>
<td>F</td>
<td>Below 60% = F</td>
<td>Below 240</td>
</tr>
</tbody>
</table>
FA
According to NSCC policy, if a student fails a course, but has not officially withdrawn from the course, and her/his last date of attendance is before the last date to withdraw (use date appropriate to your section), the student will receive a grade of FA (i.e., “Failure for Attendance Reasons”).

FN
An FN is awarded to students who never attended class.

Course Policies and Expectations
These are policies required for this course. Read these carefully. Following these policies will assist you in completing this course successfully. Please ask questions if you do not understand any expectation in this course. The ECED faculty want you to do well! From an academic perspective, you should become familiar with the expectations outlined as follows in the remaining sections of this document. To successfully complete this course, you will need to:

- Check your NS Online email regularly inside this course.
- Schedule 12-15 hours per week to complete assignments, projects, and exams.
- Check the Calendar (or Class Schedule) on a regular basis.
- Follow all the expectations and guidelines established for this course outlined in this Syllabus.

Technology Statement
Nashville State’s classes are considered to be web-enhanced. Faculty have an expectation that students will use a computer and the Internet to complete assignments, engage in online discussions, and access various course materials through D2L/NS Online course shells. Computers are available for student use at each campus during campus open hours.

D2L/NS Online and myNSCC
It is students’ responsibility to check D2L/NS Online course shells for all enrolled courses and myNSCC, including student email, on a regular basis. These are the official communication channels between the college and students, who are responsible for the information communicated through those channels. D2L/NS Online contains specific course information and myNSCC contains information important for other purposes.

ADA Compliance Statement
Nashville State complies with the Americans with Disabilities Act (ADA). If you require accommodations for any courses in which you are enrolled, contact the Access Center at 615.353.3741 or 615.353.3721, or e-mail accesscenter@nscc.edu. If you are registered with the Access Center and require an alternate format for the textbook and other course materials, please contact the Access Center.

Classroom Misconduct
Nashville State Community College has a zero-tolerance policy for disruptive conduct in the classroom. Students whose behavior disrupts the classroom will be subject to disciplinary measures. Please review the Nashville State Student Code of Conduct policy. Please be aware that children are not allowed in class or to be left unattended on campus.
**Academic Misconduct**

Any form of academic dishonesty, cheating, plagiarizing, or other academic misconduct is prohibited. Students are responsible for understanding and abiding by the Academic Misconduct Policy in the Nashville State Student Code of Conduct. In addition to other possible disciplinary measures that may be applied through regular college procedures as a result of academic dishonesty, the instructor has the authority to assign an “F” or a “zero” for the exercise, paper, or examination, or to assign an “F” for the course. Students may appeal through the appropriate college grade appeal procedures.

**Academic Early Alert System**

Nashville State Community College uses an Early Alert System to let students know of a faculty member’s concern in one or more of these academic areas: lack of attendance, lack of classroom participation, late or missing assignments, and/or poor performance on assignments/tests. *Please note that Early Alerts do not affect a student’s academic standing. If you receive an Early Alert email, please see your instructor and your academic advisor as soon as possible.

**RAVE Emergency Alert System**

Emergency events can happen at any time and Nashville State Community College wants to be able notify students if and when they occur. For this reason, all students have been enrolled in the free RAVE alert system. If you have not already done so, please log in at https://www.getrave.com/login/nscc to confirm and update your contact information and notification preferences. It is critical that your information be correct so that you will receive any emergency notifications. Your RAVE Username is your NSCC email address. If you've never received an email from RAVE with your password, or if you need to reset your password, select “Forgot your password?” and a new password will be emailed to you. Should the RAVE system indicate “user not found”, select Register and create your own RAVE account.

**Inclement Weather & Campus Closings**

Nashville State will use the RAVE alert system to send a text message to students, staff, and faculty about adjusted hours of operation and/or closings at individual campuses. All students should check the Nashville State web site home page at www.nscc.edu for announcements on campus closures, which may vary from campus to campus. Campus closures will also be announced on local television stations. Students should use their own best judgment in determining whether to report to campus during inclement weather when classes are not cancelled.

Even when campuses are closed, students are still responsible for completing all assigned work. When classes are cancelled, faculty will post online assignments and any additional instructions in the D2L/NS Online course shell. Check D2L/NS Online for a message from your instructor regarding your online assignment requirements. Faculty have discretion over adjusting deadlines or due date for assignments, but students are responsible for completing all assigned work by the due date established by the instructor.

**Class Cancellation Policy**

If the class is cancelled, the instructor will notify all students by posting in the D2L/NS Online course, e-mailing through D2L/NS Online, and/or by posting a sign on the classroom door. In the event of class cancellation, students must access D2L/NS Online to complete classwork and the assignment that will be posted in the course D2L site.
Syllabus Sign-Off

My signature below indicates that I have read the entire syllabus and understand its contents. I agree to abide by the class policies set forth for the course and will be held accountable to such policies. In particular, I am aware of the Attendance/Participation and Late Assignment policies. I also give my permission to use my work for use by my instructor or by other instructors in the Early Childhood department for the purpose of instructing others in appropriate early childhood practices.

Student___________________________________ Date____________________

This syllabus is a master syllabus. Specific course requirements are subject to revision at the discretion of the ECED department faculty. A course syllabus will be provided the first day of class.