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**Northampton Community College**

**EARL 218: Early Childhood Science**

**Syllabus – Online Sections**

**Semester:**  **Office:**

**Instructor: Phone:**

**Course: EARL 218 Email:**

**Section: Virtual Office Hours:**

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**Catalog Description:**

Students learn the development of children’s scientific thinking within the context of cultural, linguistic, and ability diversity. They learn that science is the study of the physical and natural world through observation and experimentation within the Art as a Way of Learning (AWL) framework. Students create and implement standards-based science learning experiences and environments using evidence based practice emphasizing Universal Design for Learning (UDL). Students assess children’s learning and build reciprocal partnerships with families and professionals; they use community resources to support children’s scientific thinking.

Requires 20 hours of (2 hours/ week) field experiences (labs) in programs serving children Pre-K to Grade 4. Early childhood programs must be a licensed family, group, center, Head Start, faith-based, pre-k or nursery school setting.

Additional course fees: $10.00. Child Abuse Registry, Criminal Background Check, and FBI clearances are required.

Also available through Online Learning. Video/DVD documentation of student teaching required (online students only).

**PREREQUISITES:**  **EARL106 and EARL107**

**TOTAL CREDITS: 3 LECTURE HOURS: 2 LAB HOURS: 2**

**This course is designed to promote student learning in relation to the standards and supportive skills outlined by the National Association for the Education of Young Children (NAEYC). The program standards define what you will know and be able to do when you graduate from the program. What you learn in each class and the assessment of your learning is linked directly to the six standards.**

**Earl 218 Learning Outcomes**

**Course Learning Outcome 1: Promoting Child Development and Learning**

Students explain, analyze and apply evidence based knowledge of children’s development of scientific thinking and the uniqueness of each child’s expression of learning based on multiple interacting influences to create safe, healthy, respectful, and inclusive learning environments that provide responsive, developmentally appropriate, and arts-integrated learning opportunities.

**Student Learning Outcomes**

1a.Explain and analyze each child’s characteristics and needs for development of scientific thinking and learning of science concepts.  
1b.Explain and analyze multiple influences including cultural, linguistic and ability diversity that result in the uniqueness of each child’s development of scientific thinking and learning of science concepts.

1c.Apply evidence based knowledge of developmental characteristics and multiple influences to create safe, healthy, respectful, inclusive, and aesthetic arts integrated environments and opportunities that support each child’s development of scientific thinking and learning of science concepts.

**Course Learning Outcome 2: Building Family and Community Relationships**Students explain and analyze evidence based knowledge about complex and diverse characteristics of families and communities using multiple perspectives to support each child’s scientific thinking through collaborative relationships.

**Student Learning Outcomes**

2a.Explain and analyze how diverse and complex characteristics including cultural, linguistic and ability diversity in families and communities affect the development of each child’s scientific thinking and learning of science concepts.

2b. Explain and analyze strategies teachers can use to build respectful, reciprocal relationships with families and communities including other professionals to promote each child’s development of scientific thinking and learning of science concepts.

2c. Apply evidence based knowledge to collaborate with families, communities and other professionals to support each child’s development of scientific thinking and learning of science concepts.

**Course Learning Outcome 3: Observing, Documenting, and Assessing to Support Young Children and Families**   
Students use evidence based knowledge about systematic observation and the goals, benefits, and appropriate uses of assessment in partnership with families and other professionals to make decisions about environments, curriculum, and interactions to support each child’s development of scientific thinking and learning of science concepts.

**Student Learning Outcomes**

3a. Explain and analyze the goals, benefits, and uses of assessment of science concepts.

3b. Apply ethical methods of systematic observation, documentation, and assessment.

3c. Explain and analyze how to partner with families and professionals in each child’s assessment process.

3d. Apply and analyze evidence based knowledge of observing, documenting, and assessing to make decisions about environments, curriculum, and interactions to support each child’s development of scientific thinking and learning of science concepts.

**Course Learning Outcome 4: Using Developmentally Effective Approaches**  
Students use evidence based knowledge to build positive relationships and supportive interactions as the foundation for their work with children and families. Students apply arts integrated, developmentally appropriate approaches and Universal Design for Learning to support the development of scientific thinking and learning of science concepts.

**Student Learning Outcomes**

4a. Explain, apply and analyze positive relationships and interactions to support each child’s scientific thinking and learning of science concepts.

4b. Explain, apply and analyze teaching skills and strategies including developmentally appropriate practices and technology, to support each child’s development of scientific thinking and learning of science concepts.

4c Explain, apply and analyze a broad repertoire of arts integrated, developmentally appropriate teaching / learning approaches, and Universal Design for Learning, to support each child’s development of scientific thinking and learning of science concepts.

4d. Reflect on own evidence based practices to support positive outcomes for the development of each child’s scientific thinking and learning of science concepts.

**Course Learning Outcome 5: Using Content Knowledge to Build Meaningful Curriculum**

Students use evidence based knowledge of science, Universal Design for Learning, inquiry tools, and resources to design, implement, and evaluate curriculum and experiences to support each child’s development of scientific thinking and learning of science concepts.

**Student Learning Outcomes**

5a. Explain, apply and analyze content knowledge and resources of the science/math symbol system / subject area of science.

5b. Explain, apply and analyze the content knowledge, central concepts, inquiry tools, and structure of science/ math symbol system / subject area of science.

5c. Use evidence based knowledge, early learning standards, Universal Design for Learning, and other resources to design, implement, and evaluate curriculum and experiences to support each child’s development of scientific thinking and learning of science concepts.

**Course Learning Outcome 6: Becoming a Professional**

Students use evidence based knowledge of ethical guidelines and professional standards. They engage in continuous and collaborative learning and demonstrate knowledgeable, reflective and critical perspectives to make informed decisions about advocating for the subject area of science.

**Student Learning Outcomes**

6a. Identify and reflect on career goals; identify and involve themselves with the profession.

6b. Describe and explain ethical standards, state and national laws and regulations, and accreditation systems for recognizing quality in early childhood programs.

6c. Describe and explain personal engagement in continuous, collaborative learning and demonstrate reflective and critical perspectives.

6d. Explain and analyze strategies to advocate for each child, family, and the profession.

6e. Explain and analyze knowledge about becoming a professional who can articulate and practice an individual philosophy of children’s development of scientific thinking which includes evidence based practices and Universal Design for Learning.

**The following Supportive Skills are to be integrated in assessment as appropriate:**

1. Skills in self-assessment and self-advocacy.
2. Skills in mastering and applying foundational concepts from general education.
3. Written and verbal communication skills.
4. Skills in making connections between prior knowledge/experience and new learning.
5. Skills in identifying and using professional resources.

**Alignment of the Course Objectives (above) with National Association for the Education of Young Children, the Division for Early Childhood, and Pennsylvania Special Education Para educator Standards.**

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| **Course Objective #** | **NAEYC Standards/Course Learning Objectives** | **DEC Standards** | **PA Special Education Paraeducator Standards** |
| **1** | **1a**: Knowing and understanding young children’s characteristics and needs  **1b**: Knowing and understanding the multiple influences on development and learning.  **1c:** Using knowledge of development to create healthy, respectful, supportive, and challenging environments. | **Development and Characteristics of Learners**  **EC2K2 , EC2K6, EC2K7**  **Instructional Planning**  **ES7K1**  **Development and Characteristics of Learners**  **EC2K7, EC2K4, EC2K6**.  **Language**  **EC6K1**  **Development and Characteristics of Learners EC2K7**, **EC2S1**, **EC3S2**  **Instructional Strategies**  **EC4S1, EC4S2**  **Learning Environments/Social Interactions**  **EC5S2, EC5S5, EC5S6**  **Instructional Planning**  **EC7K1, EC7K2** | **Individual Learning Differences**  **SEP3K2**  **Development and Characteristics of Learners**  **SEP2K1**.  **Foundations**  **SEP1K1, SEPK2**.  **Instructional Strategies**  **SEP4S4**,**SEP4S5**.  **Learning Environments/Social Interactions**  **SEP5S1, SEP5S2, SEP5S4**  **Instructional Planning**  **SEP7S1, SEP7S2** |
| **2** | **2a:** Knowing about and understanding diverse family and community characteristics.  **2b**: Supporting and empowering families and communities through respectful, reciprocal relationships.  **2c:** Involving families and communities in their children’s development and learning. | **Development and Characteristics of Learners**  **EC2K5, EC2K6**  **Assessment**  **EC8K1**  **Development and Characteristics of Learners**  **EC2K5**  **Learning Environments and Social Interactions**  **EC5S7**  **Language**  **EC6S1**.  **Instructional Planning**  **EC7S1**.  **Assessment**  **EC8S1**, **EC8S2, EC8S6**, **EC8S11Professional and Ethical Practices**  **EC9S2, EC9S3**R, **EC9S4**  **Collaboration**  **EC10S1**, **EC10S2**, **EC10S, EC10S8, EC10S9**  **Language**  **EC6S1**  **Assessment**  **EC8S1**, **EC8S2**  **Instructional Planning**  **EC7S1**, **EC7S7**  **Assessment**  **EC8K1, EC8S6**, **EC8S11**  **Professional and Ethical Practices**  **EC9S2**, **EC9S3**  **Collaboration**  **EC10S2**  **Professional and Ethical Practices**  **EC9S, EC10S1**, **EC10S3**, **EC10S8,**  **EC10S**9 | **Development and Characteristics of Learners**  **SEP2K1**.  **Language**  **SEP6K1**  **Collaboration**  **SEP10K1**.  **Collaboration**  **SEP10S3, SEP10K2, SEP10S2, SEP10S1**  **Individual Learning Differences**  **SEP3S1**  **Development and Characteristics of Learners**  **SEP2K1**  **Individual Learning Differences**  **SEP3S1, SEP3K1**.  **Instructional Strategies**  **SEP4S4**  **Collaboration SEP10S3**, **SEP10S2 , SEP10S4** |
| **3** | **3a:** Understanding the goals, benefits and uses of assessment.  **3b:** Knowing about assessment partnerships with families and other professionals.  **3c:** Knowing about and using observation, documentation and other appropriate assessment tools. | **Instructional Planning**  **EC7K3**  **Assessment**  **EC8K3, EC8S4**  **Learning Environment/Social Interactions**  **EC5S7**  **Instructional Planning**  **EC7S3**  **Assessment**  **EC8K1, EC8S**1, E**C8S2, EC8S6**, **EC8S8,**  **EC8S9, EC8S10**  **Professional and Ethical Practices**  **EC9S4**  **Collaboration**  **EC10S1, EC10S2**  **Learning Environments and Social Interactions**  **EC5S7**  **Instructional Planning**  **EC7K3, EC7S1**  **Assessment**  **EC8S, EC8S4, EC8S5**, **EC8S6,**  **EC8S7**, **EC8S9**, **EC8S10**, **EC8S11** | **Assessment**  **SEP8K1,SEP8S1, SEP8K2, SEP8K3.**  **Assessment**  **SEP8S2, SEP8S1**. |
| **4** | **4a:** Understanding positive relationships and supportive interactions as the foundation of their work with children.  4 b: Knowing and understanding effective strategies and tools for early childhood education.  **4c:** Use a broad repertoire of developmentally appropriate teaching/learning experiences  4d: Reflecting on their own practice to promote positive outcomes for children. | **Instructional Strategies**  **EC4S3, EC4S5**  **Learning Environments and Social Interactions**  **EC5K4**.  **Foundations**  **EC1K1**, **EC1K2** .  **Development and Characteristics of Learners**  **EC2S1**  **Individual Learning Differences**  **EC3S2**.  **Instructional Strategies**  **EC4S1, EC4S3, EC4S5**  **Learning Environments and Social Interactions**  **EC5S3** **Instructional Planning**  **EC7K1**, **EC7S2, EC7S8**  **Professional and Ethical Practices**  **EC9S6**  **Collaboration**  **EC10S1**, **EC10S9**  **Foundations**  **EC1K2**  **Development and Characteristics of Learners EC2K6**, **EC2K7**, **EC3S2**  **Instructional Strategies**  **EC4S1**, **EC4S2, EC4S3**, **EC4S6EC4S7**,  **EC4S8**  **Learning Environments/ Social Interactions**  **EC5S2**, **EC5S3**, **EC5S5**  **Instructional Planning**  **EC7K1**, **EC7K2, EC7S5, EC7S8** **Professional and Ethical Practices**  **EC9S6**  **Individual Learning Differences**  **EC3S1**  **Instructional Strategies**  **EC4S1** | **Language**  **SEP7S1**  **Foundations**  **SEP1K1**.  **Learning Environments/ Social Interactions**  **SEP5K, SEP5S3**  **Instructional Strategies**  **SEP4S4**, **SEP4K1**, **SEP4K2**  **Collaboration**  **SEP10S5**  **Learning Environments / Social Interactions**  SEP5K2  **Learning Environments / Social Interactions**  **SEP5K2.** |
| **5** | **5a:** Understanding content knowledge and resources in academic disciplines.  **5b**: Knowing and using central concepts, inquiry tools, and structures of content areas or academic disciplines.  **5c:**Using their own knowledge, appropriate early learning standards, and other resources to design, evaluate and build meaningful, challenging curricula for each child. | **Instructional Planning EC7K2**  **EC7K1**, **EC7K2**  **Professional and Ethical Practices**  **EC9S6**  **Foundations**  **EC1K1**, **EC1K2**  **Development and Characteristics of Learners**  **EC2K6**, **EC2K7**  **Individual Learning Differences**  **EC3S1**, **EC3S2**.  **Instructional Strategies**  **EC4S1**, **EC4S3, EC4S5, EC4S6, EC4S7,**  **EC4S8**  **Learning Environments and Social Interactions**  **EC5K3**, **EC5S1, EC5S2, EC5S3**  **Instructional Planning**  **EC7S2**.  **Learning Environments and Social Interactions**  **EC5S5**.  **Instructional Planning**  **EC7S5, EC7S8**  **Assessment**  **EC8S11** | **Foundations**  **SEP1K2**  **Instructional Strategies**  **SEP4K3 , SEP4K4**  **SEP4S1, SEP4S2 , SEP4S3**  **Learning Environments/ Social Interaction**  **SEP5K2, SEP5S, SEP5S2 , SEP5S3,**  **SEP5S4, SEP5K1**. |
| **6** | 6a**:** Identifying and involving oneself with the early childhood field.  6b: Knowing about and upholding ethical standards and other professional guidelines.  6c: Engaging in continuous, collaborative learning to inform practice.  6 d: Integrating knowledgeable, critical and reflective perspectives on early education.  6e: Engaging in informed advocacy for children and the profession. | **Foundations**  **EC1K2**  **EC1K2** , **EC1S1**  **Professional and Ethical Practices**  **EC9KI, EC9S1**  **Instructional Planning**  **EC7S3**  **Professional and Ethical Practices**  **EC9S4**  **Foundations**  **EC1K2**.  **Instructional Planning**  **ES7K1**  **Professional and Ethical Practices**  **EC9S6**  **Foundations EC1K1, EC1K2**  **Professional and Ethical Practices**  **EC9KI , EC9K2, EC9S7** | **Professional and Ethical Practice**  **SEP9S2, SEP9S3, SEP9S4, SEPS5,**  **SEP9S6, SEP9S7, SEP9S8,** .  **SEP9S9, SEP9S11, SEP9S12 , SEP9S13**.  **SEP9K, SEP9S3, SEP9S5, SEP9S10,**.  **SEP9S11, SEP9S12**.  .  **SEP9K2**  **Learning Environments/Social Interactions**  **SEP5S1**  **Professional and Ethical Practices**  **SEP9K1, SEP9S1**. |

***DEC - Initial Special Education Professionals in Early Childhood Special/Education/Early Intervention, Birth to Eight Standards:***

Standard 1: Foundations

Standard 2: Development and Characteristics of Learners

Standard 3: Individual Learning Differences

Standard 4: Instructional Strategies

Standard 5: Learning Environments/Social Interactions

Standard 6: Language

Standard 7: Instructional Planning

Standard 8: Assessment

Standard 9: Professional and Ethical Practice

Standard 10: Collaboration

*SEP - Pennsylvania Special Education Paraeducator Standards:*

Standard 1: Foundations

Standard 2: Development and Characteristics of Learners

Standard 3: Individual Learning Differences

Standard 4: Instructional Strategies

Standard 5: Learning Environments/Social Interactions

Standard 6: Language

Standard 7: Instructional Planning

Standard 8: Assessment

Standard 9: Professional and Ethical Practice

Standard 10: Collaboration

**Textbooks and Resources**

**Textbooks:**

1. Chaille, C. & Britain, L. (Current edition). *The Young Child as Scientist*. Boston, MA: Pearson Education. (referred to as “C-B” in Course Calendar)
2. Trawick-Smith, J. (Current edition). *Early Childhood Development.* Upper Saddle River, NJ: Merrill-Prentice Hall. (referred to as “TS” in Course Calendar)

**E-Portfolio:**

1. Students purchase Task stream card from the book store to create an e-portfolio.

**Required Resources:**

1. Harms, Clifford, Cryer. (Current edition). *Infant/Toddler Environment Rating Scale*. New York, NY: Teachers College Press. (referred to as “ITERS” in Course Calendar)
2. Harms, Clifford, Cryer. (Current edition). *Early Childhood Environment Rating Scale*. New York, NY: Teachers College Press. (referred to as “ECERS” in Course Calendar)

Scoring Sheets for Environment Rating Scales available at: <http://www.teacherscollegepress.com/free_downloads.html>

1. PA Dept. of Education. (Current edition). *PA Learning Standards Early Childhood for Infant Toddler, Early Childhood, Kindergarten.* Harrisburg, PA: PA Department of Education. (referred to as “PA-ELS” in Course Calendar)  
   Also available online at:

<http://www.pakeys.org/pages/get.aspx?page=Career_Standards>

1. PA Dept. of Education. (Current edition). *PA Learning Standards Early Childhood for 1st Grade, & 2nd Grade.* Harrisburg, PA: PA Department of Education. (referred to as “PA-ELS” in Course Calendar)  
   Also available online at:  
   <http://www.pakeys.org/pages/get.aspx?page=Career_Standards>
2. ECE Department.(Current edition). *Early Childhood Education Program Student Manual*. Bethlehem, PA: Northampton community College. (referred to as “ECE Manual” in Course Calendar)  
   Also available online at:   
   <http://www.northampton.edu/Early-Childhood-Education/Student-Resources-and-Presentations.htm> ; Click on ECE Manuals – Student
3. PA Department of Public Welfare. (Current edition). *The Pennsylvania Code: Child Day Care Center; Group Homes; Family Child Care Homes.* Harrisburg, PA: DPW. (Referred to as “PA Code” in Course Calendar)   
   Available online at:   
   <http://www.dpw.state.pa.us/provider/earlylearning/index.htm>
4. NAEYC. (Current edition). *NAEYC’s Code of Ethical Conduct.* Washington, DC: NAEYC. (Referred to as “NAEYC Code” in Course Calendar)  
   Available online at:   
   <http://www.naeyc.org/positionstatements/ethical_conduct>
5. NAEYC/DEC. (Current edition). *Early Childhood Inclusion:A Joint Position Statement of the Division for Early Childhood (DEC) and the National Association for the Education of Young Children (NAEYC)*. Chapel Hill: The University of North Carolina, FPG Child Development Institute.  
   Also available online at:  
   <http://www.naeyc.org/files/naeyc/file/positions/DEC_NAEYC_EC_updatedKS.pdf>
6. PA Department of Public Welfare. (Current edition). *Individualized Family Service Plan (IFSP) Individualized Education Program (IEP)*. Harrisburg, PA: DPW.  
   Available online at:  
   <http://www.dpw.state.pa.us/fordisabilityservices/earlyinterventionservices/earlyinterventionforms/index.htm> Click on Individualized Family Service Plan (IFSP)
7. Division for Early Childhood (DEC). DEC Code of Ethics. Missoula, MT:DEC Also available online at: [http://www.dec-sped.org/uploads/docs/about dec/position\_concept\_papers/](http://www.dec-sped.org/uploads/docs/about%20dec/position_concept_papers/) Code%20of%20Ethics\_updated\_Aug2009.pdf
8. Council for Exceptional Children (CEC): CEC Ethical Principles for Special Education Professionals. Arlington, VA:CEC Also available online at: <http://www.cec.sped.org/Content/NavigationMenu/ProfessionalDevelopment/ProfessionalStandards/EthicsPracticeStandards/CEC_Code_of_Ethics_for_Educators_of_Persons_with_Exceptionalities.htm>
9. Cultural, Linguistic, and Ability Diversity (CLAD) Resource Packet  
   Also available online at:   
   <http://www.northampton.edu/Early-Childhood-Education/Student-Resources-and-Presentations.htm>
10. Sketch pad or notebook with unlined paper
11. Binders: Course Assessment Portfolio (1” size); TAOC Portfolio (3” size)
12. In addition to the required textbooks and resources, you will also need access to:

* Computer
* Digital Camera
* Digital Video
* Lab Apron

**Instructor Resources:**

1. Sandall, S., Hemmeter, ML., Smith, B. J., & McLean, M. (Current edition). *DEC Recommended Practices – A Comprehensive Guide for Practical Application in Early Intervention/Early Childhood Special Education.* Missoula, MT: Division for Early Childhood.

###### Course Policies

**Class Attendance and Withdrawal**:  
Online courses are designed to give you some flexibility in your ability to access course content, submit assignments, and interact with your instructor and fellow students. However, these courses are not self-paced. You are expected to fully participate in all class activities, and to submit all assignments by their due dates.  
  
Note that if you do not participate in the class, submit assignments, or contact the professor during a consecutive two-week period, you may be withdrawn from the class on the recommendation of the professor. However, do not assume that this will happen automatically. Unless you officially withdraw, you may owe money and receive an "F" as your final grade.   
  
**Consequences of Late Work or Missed Exams:**Assignment details and due dates can be found in the **Assignments** section of Blackboard. Late assignments will result in points deducted as follows:

* All weekly assessments (e. g. journals) are due on time. Late submissions will not be accepted.
* All major papers, projects, and quizzes will drop two percentage points for each day that they are late. Refer to rubrics for further information.
* All missed assignments and quizzes will get “0” points.

In case of unexpected emergencies that result in lateness, email your course instructor as soon as possible. **Violations of Academic Honesty Policy:**All forms of cheating and plagiarism are serious violations of NCC's academic honesty policy. Depending on the severity of the offense, I will assess one of the following penalties:

* A written warning, with the requirement that the assignment be redone within the specified time.
* An “F” grade for the assignment or test.
* An “F” grade for the course.

See the Course Information page (Student Responsibilities folder) and the NCC Student Handbook for more details, including steps for appealing charges.

**Electronic Communication:** I will be using NCC e-mail account through Blackboard to communicate with the group or individuals as needed. You are expected to check your NCC e-mail regularly. If you have any questions or concerns, contact me through my NCC e-mail, by writing the course number in the “subject line”. I will not open any mail sent through a personal account.

**Important NCC Services and Policies**

**Disability Services**: Northampton Community College encourages academically qualified students with disabilities to take advantage of its educational programs. Services and accommodations are offered to students with disabilities at no additional cost to facilitate accessibility to College programs and facilities.

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| **Attention Students!** This course has been constructed utilizing Principles of Universal Instructional Design.  If you are requesting reasonable accommodations, please contact the Office of Disability Services at 610-861-5342 or [disabilityservices@northampton.edu](mailto:disabilityservices@northampton.edu).  Additional information for students with disabilities may also be found at <http://www.northampton.edu/Student-Resources/Disability-Services.htm> |

**Tutoring Services**: The Learning Center at NCC provides free tutoring services, including real-time online tutoring. Please see the folder called **Student Rights and Support Services** in the **Course Information** page for details and applicable tutoring links. See the following website for the most up-to-date online tutoring schedule and information:  
<http://www.northampton.edu/Student-Resources/Learning-Center/Tutoring-Services/Online-Tutoring.htm>

Access the online tutor for ECE courses at the following email address: [ecetutor@northampton.edu](mailto:ecetutor@northampton.edu)  
  
**Incomplete Policy:** An Incomplete grade of “I” is issued only at the student’s request with the permission of the instructor, to allow completion of specific course work the student did not complete due to valid, unforeseen circumstances. The deadline for completing the course requirements is no more than 5 months after the date grades were due in the semester in which the “I” grade was issued. The professor will designate that the incomplete grade becomes a specific letter grade if the work is not completed.  
  
**For further information** regarding any NCC procedures or policies refer to the current **Student Handbook** at the following link:  
<http://www.northampton.edu/Documents/Academics/Student%20Handbook.pdf>

**Instructional Plan**

**Assignments Required and Weight of Each in Determining Final Grade**:

1. Child Assessment Project – 10% \*\*
2. Curriculum Assessment Project – 10% \*\*
3. Professional Growth and Philosophy Paper – 10% \*\*
4. Constructivist Approaches Quiz – 5%
5. Scientific Inquiry Project – 5%
6. Resource File: Family and Community Booklet – 5%
7. Labs – 10%
8. Video Assignments – 6% \*\*
9. Teaching Skills and Strategies Evaluation by Faculty – 5%
10. Discussion Forum – 10%
11. Reflection Journals – 10%
12. Weekly Assignments – 10%
13. Course Assessment e-Portfolio – 2%
14. TAOC e-Portfolio – 2%

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| Students must complete the following assessments in order to pass this course:   * All Key Assessments of the Course \*\* * Lab Attendance and Assignments * Course Assessment e-Portfolio * TAOC e-Portfolio   Students must earn C or better in the following assessments in order to pass this course:   * Lab Assignments * Teaching Skills and Strategies Evaluation by Faculty |

**Description of Assignments**

Content related to Cultural, Linguistic, and Ability Diversity will be reflected within the assignments and in the course calendar.

* **Child Assessment Project:**

The purpose this project is to give you an opportunity gather evidence of one child’s learning by observing and recording his/her actions in written and visual format by collecting samples of his/her work. You will use this evidence to:

* + Create a Child Assessment Portfolio
  + Write a Child Assessment Paper that documents your knowledge of child development and learning
  + Prepare and/or implement a conference to partner with CAC’s family
* **Curriculum Assessment Project:** The purpose of this assessment is to demonstrate your ability to plan, implement, and evaluate learning experiences for each child in the subject area of Science. The project will provide you with learning experiences to:
* Plan experiences based on various process standards and content standards of Science
* Implement learning experiences using appropriate teaching skills and strategies to facilitate learning
* Use *Art as a Way of Learning (AWL) Explorations in Teaching* as a framework to integrate the arts into Math/Science symbol systems
* Evaluate own ability to promote learning of Science concepts for each child.
* **Professional Growth and Philosophy Paper:** The purpose of this paper is to give you an opportunity to reflect on your growth as an early childhood professional, with a focus on Early Childhood Science. Consider your ability to:
  + Involve self with the field;
  + Explain ethical standards and state and national systems for quality in early childhood programs;
  + Research and collaborate with others to inform evidence based practice;
  + Explain ways to advocate within the context of cultural, linguistic, and ability diversity; and
  + Articulate and practice your own philosophy about young children’s development and learning of science.
* **Quiz – Constructivist Approaches:** This quiz will include the constructivist theories by Piaget and Vygotsky, and the teacher’s role for creating a constructivist learning environment.
* **Scientific Inquiry Project**: This is an assignment unique to this class. This is a long term project designed to help you understand the scientific inquiry process. You will pose a question related to a topic of your choice and go through the steps of scientific inquiry process to find answers to your own question.
* **Resource File: Family and Community Booklet**: You will research community resources in the area of science and create a booklet for the family of your CAC in context of his/her interests and abilities related to the area of science.
* **Lab:** Twenty (20) hours of documented lab work is required for this course. You will have ten 2-hour labs beginning with class 4 and continuing through class 13. You must secure a lab site and a cooperating teacher by the end of week 1 of the semester. You may choose to do your labs at your worksite. An *Understanding of Participation* form must be submitted by the lab site by end of week 3 of the semester.

You will work under a cooperating teacher, completing weekly lab assignments. Lab requirements are as follows:

* Health and safety requirement: As an online student, you are to verify that all requirements for your state or country are met. Please confirm with your lab site.
* Procedures and Guidelines: Follow the Code of Ethical Conduct by The National Association for the Education of Young Children (NAEYC) for all interactions with children, parents, and colleagues.
* Legal Considerations: Make sure that all children captured in photo / video have a signed release on file at the site (refer to Student Manual for a copy). Practice confidentiality by using numbers or fictitious names when describing situations for discussions and/or writing observations. Never discuss children outside of Discussion Forums.
* Attendance form must be signed by the cooperating teacher in order to get credit for each lab. If an emergency prevents you from attending a lab, notify your course instructor and your lab site.

Refer to *ECE Student Manual* for lab information.

* **Video Assignment**: You will submit videos of your lab work during lab weeks 1, 5, and 8. These videos will allow you to reflect on your teaching skills and strategies through viewing yourself in action in labs as you interact with your Child Assessment Child (CAC) and other children during implementation of a Learning Experience Plan (LEP). They will also allow your instructor to ‘observe’ your interactions during labs.
* **Teaching Skills and Strategies Evaluation by Faculty:** Your course instructor will assign a final grade for your use of Teaching Skills and Strategies during labs based on multiple sources of evidence such as lab supervision, feedback from your cooperating teacher, and lab assignments.
* **Discussion Forum**: You will participate in weekly forums, responding to the guiding questions as well as interacting with others. This is an important aspect of the course where you will have an opportunity to share your thoughts as well as clarify your concepts. Evidence based practice and children with diversity will be included in weekly forums.
* **Reflection Journals**: You will complete ten weekly journals during the semester, reflecting on your own learning of the course concepts. Weekly themes will include culture, language and ability diversity topics.
* **Weekly Assignments**: You will complete ten weekly assignments during the semester, focusing on the long term inquiry project.
* **Course Assessment e-Portfolio**: You will follow the step-by-step directions to build your e-portfolio for EARL 218. There are two systems for creating e-Portfolio – Google e-Portfolio and Task Stream e-Portfolio. If you already began documenting your work in a Google e-Portfolio you have two choices:
  + You can continue to maintain and document your work in Google finishing the program with a completed e-Portfolio in Google.
  + You can come aboard with Task Stream and post prior key assessments into your Task Stream account so that when you graduate you have a completed Task Stream e-Portfolio that documents all of your work.

Recommendation from ECE Department: If you are less than halfway through the program you should transfer your work into Task Stream.

* **Course Assessment Portfolio Binder**: Regardless of the system you use for your e-Portfolio, you will build a portfolio binder following the organization guide provided with the assignment. This will serve as a back-up document for your e-Portfolio. You will submit the table of contents and photos as evidence of your binder.
* **TAOC e-Portfolio and Binder**: TAOC is the Transfer and Articulation Oversight Committee of the Department of Education in PA. According to the TAOC agreement, there is a statewide Program-to-Program articulation in ECE which allows students to transfer their credits from a 2-year-college to a 4-year-college *if* they submit a standard and outcomes-based TAOC Portfolio. You will build your TAOC portfolio by organizing required artifacts from each course on an ongoing basis. This will serve as your transfer / internship portfolio. You will create TAOC portfolio using your e-Portfolio system *and* also in a binder. You will submit the table of contents and photos as evidence of your binder.

For complete descriptions of assignments and rubrics, refer to the Course Information section of Blackboard.

**Due Dates for Assignments:** Responses to guiding questions of the weekly forum are due by midnight on Thursday; all other assignments are due by midnight on Sunday of the week that they are due.

**Feedback on Assignments/Projects/Discussions**  
Once your assignments have been submitted they will be graded. You will be able to view your grades and any written feedback in the Grade Book of Blackboard.  You can expect to receive a grade and/or written feedback on your weekly assignments (journals, assignments, quizzes) within 7 days of submission. Your discussion forum posts will be read at least every other day and graded within 3 days of the discussion forum closing.

**Assessment Criteria:**

The general criteria for grading work is as follows:

A = Students demonstrate ability to describe, explain, analyze, and apply information,

reasoning, context, knowledge, and judgment.  
B = Students demonstrate ability to describe and explain information, reasoning, and

knowledge.  
C = Students demonstrate ability to describe information.  
D = Students demonstrate partial ability to describe information.

**Grade Scale**:   
  
The following grades are used in the Early Childhood department:

A = 93 – 100 %

A- = 90 – 92 %

B+ = 87 – 89 %

B = 83 – 86 %

B- = 80 – 82 %

C+ = 77 – 79 %

C = 73 – 76 %

D+ = 67 – 72 %

D = 60 – 66 %  
F = 0 – 59 %

**Please note: There are no A+ or C- grades. Any final grade below C means that the course must be repeated and passed in order to enroll in Internship.**

Rubrics are provided for each graded assignment. Use your rubric as a guide for completing your assignment, to ensure that you are describing, explaining, and analyzing the course concepts by using your knowledge of related concepts from other courses. Grades are directly related to the quality of your analysis and critical thinking about the assigned questions. Use your own words to explain your thoughts rather than using phrases directly from textbooks and other resources. It is important for you to clearly reflect your understanding of the weekly topics.

The online grade book will calculate your total points and weighted percentages.   
Your final weighted percentage will be used to determine your final grade.

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| **Save all your work!**  You are expected to save all your assignments and rubrics on disks/thumb drives as back up data to safe guard against loss of your hard copy or problems with your hard drive. You will need artifacts from this and other courses to develop your TAOC Portfolio. |

**Course Calendar**

I reserve the right to change topics or assignments when necessary to make classes more relevant to current events or required student outcomes. Therefore, you should not submit assignments ahead of schedule unless you have obtained permission to do so. Check **Announcements** in Blackboard and the **Assignments** section for details and/or changes to assignments. Be sure to print out a copy of the Course Calendar with due dates listed. All assignments are due by midnight on Sunday.

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| **Wk 1** | **Topic** | **Reading**  **Print Materials** | **Learning Experiences** | **Lab Assignemnts** | **Other Assignemnts** | **Assignments Due** |
|  | Introduction to course and lab; Scientific Inquiry;  Inclusion | -Manual: Labs -TS: Pp. 48-55  -Website: National Science Teachers Association (NSTA)  - Website: NSTA Scientific Inquiry  - Website: What is Inquiry Based Learning? | -CLAD Packet: NAEYC/DEC joint Position Statement on Inclusion  -Read / discuss gaps at lab sites | Lab Preparation:  -Clearances  -Sign up for lab  -Give Coop’s email to Instructor | -Assignment 1  Lab preparation  -Journal 1  Science of your childhood | -Assignment 1  -Journal 1  -Lab Preparation |
| **Wk 2** | **Topic** | **Reading**  **Print Materials** | **Learning Experiences** | **Lab Assignemnts** | **Other Assignemnts** | **Assignments Due** |
|  | The Child as Theory Builder; Brain Research | -C-B: Chapter 1;  -TS: Pp. 116-118;  -Labs: Observation  - Website: Zero-to-Three  - Website: Zero-to-Three - Brain Development  - Website: Reggio Kids  - Website: Project Approach - Illinois Projects in Practice | - Website: Bilingual Brain  -Discuss the advantages of bilingualism and strategies for supporting DLL in classroom. | Lab Preparation | -Assignment 2  Inquiry Project Step 1 –  The Inquiry Process  -Journal 2  Three Types of Knowledge | -Assignment 2  -Journal 2  -Lab Preparation |
| **Wk 3** | **Topic** | **Reading**  **Print Materials** | **Learning Experiences** | **Lab Assignemnts** | **Other Assignemnts** | **Assignments Due** |
|  | Constructivist Curriculum Model | -C-B: Chapter 2 -Manual: TSS  - Website: Constructivist Teaching and Learning  - Website: CONNECT Module 7: Tiered Instructions  - Website: Teacher’s Viewpoint – Soc-Emo development  - Website: Teacher’s Viewpoint – Academic Learning | Discuss the connections between the constructivist approach and Tiered Instructions | Lab Preparation:  -Review Lab Information in ECE Student Manual  -Create a Coop Teacher Folder | -Assignment 3  Inquiry Project Step 2 - Question  - Journal 3  Constructivist Curriculum Model | -Assignment 3  -Journal 3  -Lab Preparation |
| **Wk 4** | **Topic** | **Reading**  **Print Materials** | **Learning Experiences** | **Lab Assignemnts** | **Other Assignemnts** | **Assignments Due** |
|  | Constructivist Learning Environment; Role of Constructivist Teacher | -C-B: Chapters 3 & 4  -Manual: ECE Curriculum  - Website: Center for Applied Special Technology (CAST)  - Website: National Center for Universal Design for Learning  - UDL: CLAD Packet | Reflect on the features of constructivist environment and role of the constructivist teacher using examples from prior observations. | Lab 1: Observe  -Video 1 | -Assignment 4  Inquiry Project Step 3 - Hypothesis  - Journal 4  Role of Constructivist Teacher | -Assignment 4  -Journal 4  -Lab 1  -Video 1 |
| **Wk 5** | **Topic** | **Reading**  **Print Materials** | **Learning Experiences** | **Lab Assignemnts** | **Other Assignemnts** | **Assignments Due** |
|  | Math Processes; Scientific Inquiry Process;  Multiple Intelligence | -Manual: ECE Curriculum  -TS: Pp. 357-359  -The Young Child and Mathematics (Copley): Ch. 3  - Website: YC Magazine: Using Language during Science  - Website: Howard Gardner  - Website: Multiple Intelligences - PBS | - Website: YC Magazine:  Investigating Rocks and Sand  -Discuss the connections between Multiple Intelligences and the Inquiry-Based Approach  -Website: MI Assessment  -Website: MI Practice | Lab 2: Observe | -Assignment 5  Inquiry Project Step 4 – Conduct the Experiment & Observe  - Journal 5 Website: Addressing MI through Inquiry-Based Approach | Assignment 5  -Journal 5  -Lab 2 |
| **Wk 6** | **Topic** | **Reading**  **Print Materials** | **Learning Experiences** | **Lab Assignemnts** | **Other Assignemnts** | **Assignments Due** |
|  | Assessment / Guidelines from National and State Standards | - Website: National Science Education Standards  - Website: PA Early Learning Standards  - Website: PA SAS System  - Website: Colorin Colorado | - Website: CONNECT Module 7: Key Features of RTI  - Website: Formative Assessment – Social Emotional Development  - Website: Formative Assessment – Academic Learning  -Discuss Formative Assessment in the area of Science | Lab 3:  - Reflect  & Respond | -Assignment 6  Assessment of ELL - Colorin Colorado  - Journal 6  Formative Assessment | -Assignment 6  -Journal 6  -Lab 3 |
| **Wk 7** | **Topic** | **Reading**  **Print Materials** | **Learning Experiences** | **Lab Assignemnts** | **Other Assignemnts** | **Assignments Due** |
|  | Partnering with Families & Professionals  Learning Experience Plans (LEP) | -TS: Chapter 18: Parents, Families, and Children  - Website: PA-ELS Key Learning Area: Partnerships for Learning  - Website: CONNECT Module 4 Family Professional Partnerships – Handout 4.5 – IDEA The Law  - Website: CSEFEL – Family Tools  - Website: Children’s Books Related to Science  -Website: PBS Parents – Children with Disabilities | -Explore website of Colorin Colorado for partnering with families  -Review a sample of LEP to discuss how to fill out the LEP form.  -Work in groups to Plan LEP for lab 5 on Children’s book related to Science.  -Refer to CONNECT Video 6.5 Preparing a book for dialogic reading  and Video 6.6 Demonstration of CROWD prompts (links in Lab 4) | Lab 4: Reflect & Respond | -Assignment 7  All About Autism at PBS Parents  - Journal 7  Partnering with Families -  Friends Like You, Friends Like Me | -Assignment 7  -Journal 7  -Lab 4 |
| **Wk 8** | **Topic** | **Reading**  **Print Materials** | **Learning Experiences** | **Lab Assignemnts** | **Other Assignemnts** | **Assignments Due** |
|  | Constructivist Physics | -C-B: Chapter 5  - Website: PA-SAS System  - Website: PA-ELS  - Website: Science Issue of Young Children Magazine  - Website: YC Magazine: Science in the Air  - Website: PaTTAN – Teachers’ Desk Reference for AT  - Website: CONNECT Handout 5.2 – Equipment  - Website: CONNECT Handout 5.3 – Adaptations | -Work in groups to adapt one of the activities on Physics for LEP for lab 6. | Lab 5:  -Plan and Implement LEP for lab 5: Children’s book related to Science.  - Student Self Eval. of TSS  -Video 2  -Coop Feedback on Lab Student Observation Logs | -Assignment 8  Reflection on YC Article – Science in the Air  -Journal 8 Criteria for Physical Knowledge – interacting with ELL children | -Assignment 8  -Journal 8  -Lab 5  -Video 2 -Student Self Eval. on TSS -Coop Feedback on Lab Student Observation Logs  **-Constructivist Approaches Quiz** |
| **Wk 9** | **Topic** | **Reading**  **Print Materials** | **Learning Experiences** | **Lab Assignemnts** | **Other Assignemnts** | **Assignments Due** |
|  | Constructivist Chemistry | -C-B: Chapter 6  - Website: PA-SAS System  - Website: PA-ELS  - Website: Science Issue of Young Children Magazine  - Website: YC Magazine: Recipes for Science Unit  - Website: CONNECT Module 1 on Embedded Interventions Handout 1.1 Examples of Environmental Modifications  - Website: Handout 1.2 Examples of Peer Support | -Work in groups to adapt one of the activities on Chemistry for LEP for lab 7. | Lab 6:  -Plan and Implement  LEP for lab 6: Constructivist Physics. | -Assignment 9  Reflection on YC Article – 10 Benefits of Science  - Journal 9  Chemistry: Represent concepts of Chemistry in visual art. | -Assignment 9  -Journal 9  -Lab 6 |
| **Wk 10** | **Topic** | **Reading**  **Print Materials** | **Learning Experiences** | **Lab Assignemnts** | **Other Assignemnts** | **Assignments Due** |
|  | Constructivist Biology | -C-B: Chapter 7  - Website: PA-SAS System  - Website: PA-ELS  - Website: YC Magazine: Science Education Through Gardening  - Website: PBS Kids in the Classroom  - Website: Learning Starts  - Website: Assistive Technology Resources B-3  - Website: Assistive Technology Resources 3-8  - Website: YC Magazine: AT – Supporting Participation of Children with Disabilities | -Work in groups to adapt one of the activities on Biology for LEP for lab 8.  - Website: CONNECT Module on AT Handout 5.5 Planning Tool  - Website: Handout 5.6 Sophie’s AT Plan  -Work in groups to plan for Sophie | Lab 7: Technology  -Plan and Implement  LEP for lab 7: Constructivist Chemistry.  - Website: YC Magazine - Finding Education in Education Technology | -Assignment 10  Reflect on YC Article – Science Education Through Gardening  - Journal 10  Biology: Using materials to create UDL environment for promoting development of each child. | -Assignment 10  -Journal 10  -Lab 7 |
| **Wk 11** | **Topic** | **Reading**  **Print Materials** | **Learning Experiences** | **Lab Assignemnts** | **Other Assignemnts** | **Assignments Due** |
|  | Constructivist Environment and Ecology | -C-B: Chapter 7  - Website: PA-SAS System  - Website: PA-ELS  - Website: YC Magazine: Teaching and Learning About the Natural World  - Website: YC Magazine: Resources for Science  - Website: Temperament – Tips from Zero to Three  - Website: Colorin Colorado | -The Importance of Nature by Chawla  -Work in groups to adapt one of the activities on Ecology for LEP for lab 9.  - Website: CSEFEL – Resources for Teachers Scripted Stories  (Print a copy or download PPT of one of the books for Lab 9)  - Website: Explore ASL Handspeak website to learn signs related to Science | Lab 8:  -Plan and Implement  LEP for lab 8: Constructivist Biology.  -Video 3 | Reflect in forum on  Environment and Ecology: Interacting with ELL children | -Lab 8  -Video 3  **-Scientific Inquiry Project** |
| **Wk 12** | **Topic** | **Reading**  **Print Materials** | **Learning Experiences** | **Lab Assignemnts** | **Other Assignemnts** | **Assignments Due** |
|  | Earth and Space | - Website: PA-SAS System  - Website: PA-ELS  - Website: National Geographic Kids  - Website: Astronomy Kids | -Work in groups to adapt one of the activities on Earth and Space for LEP for lab 10. | Lab 9: Large Group  -Plan and Implement  LEP for lab 9: Constructivist Ecology.  -Read at Circle Time from CSEFEL during lab. | Reflect in forum on  Earth and Space; reflect on conducting LEP with large group; pose culturally relevant questions | **-**Lab 9  **-Family and Community Booklet** |
| **Wk 13** | **Topic** | **Reading**  **Print Materials** | **Learning Experiences** | **Lab Assignemnts** | **Other Assignemnts** | **Assignments Due** |
|  | Technology | - Website: PA-SAS System  - Website: PA-ELS  - Website: NAEYC Position Statement on Technology  - Website: YC Magazine – Finding Education in Education Technology  - Website: YC Magazine Nov.2003  - Website: YC Magazine - Using Technology in Primary Classroom | Share own experiences with technology in the classroom | Lab 10:  -Plan and Implement LEP for lab 10: Earth and Space.  -Student Self Eval. on TSS  -Coop Feedback on Lab Student Observation Logs | **-** Reflect in forum on using  Technology in Teaching Young Children | -Lab 10 -Student Self Eval. on TSS -Coop Feedback on Lab Student Observation Logs **-Child Assessment Project** |
| **Wk 14** | **Topic** | **Reading**  **Print Materials** | **Learning Experiences** | **Lab Assignemnts** | **Other Assignemnts** | **Assignments Due** |
|  | Advocacy for Science Education | - Website: Teachnology - Current Trends in Education  - Website: Children’s Defense Fund on Early Childhood Education and Care  - Website: YC Magazine – Supporting Scientific Thinking and Inquiry Through Play  - Website: NAEYC | - Review the CDF site and discuss ways to advocate for children  -Review YC article to advocate for learning about Science through play | Lab Make-up  # 1: Complete a missed lab | **-** Reflect in forum on  Advocacy Efforts for Science for all children | **-Curriculum Assessment Project** |
| **Wk 15** | **Topic** | **Reading**  **Print Materials** | **Learning Experiences** | **Lab Assignemnts** | **Other Assignemnts** | **Assignments Due** |
|  | Teacher as Theory Builder;  Reflections | C-B: Ch. 8  - Website: Scientific Inquiry Among the Preschool Set | - Respond to 3-2-1 reflection on the course.  -Create a representation of your main learning from the course, using any of the arts. | Lab Make-up  # 2: Complete a missed lab | -Reflect in forum on Teacher as Theory Builder | **-Professional Growth and Philosophy Paper** |
| **Wk 16** | **Topic** | **Reading**  **Print Materials** | **Learning Experiences** | **Lab Assignemnts** | **Other Assignemnts** | **Assignments Due** |
|  | Finals Week  Final Projects Due by Noon |  |  |  |  | **-Course Assessment Portfolio (electronic and binder)**  **-TAOC Portfolio (electronic and binder)** |