

LSC Use Only No:	LSC Action-Date:	UWUCC USE Only No.	UWUCC Action-Date:	Senate Action Date:
		03-231	Apr 11/18/03	Apr 12/2/03

Curriculum Proposal Cover Sheet - University-Wide Undergraduate Curriculum Committee

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Proposing Department/Unit Professional Studies in Education (PSE)	Phone 724-357-7927

Check all appropriate lines and complete information as requested. Use a separate cover sheet for each course proposal and for each program proposal.

1. Course Proposals (check all that apply)

☐ New Course ☐ Course Prefix Change ☐ Course Deletion
☐ Course Revision ☒ Course Number and/or Title Change ☒ Catalog Description Change

ECED 310 Integrated Curriculum I

ECED 310 Science and Health in the Literacy-based Early Childhood Curriculum

Current Course prefix, number and full title

Proposed course prefix, number and full title, if changing:

2. Additional Course Designations: check if appropriate

☐ This course is also proposed as a Liberal Studies Course. ☐ Other: (e.g., Women's Studies, Pan-African)
☐ This course is also proposed as an Honors College Course.

3. Program Proposals

☐ New Degree Program ☐ Catalog Description Change ☐ Program Revision
☐ New Minor Program ☐ Program Title Change ☐ Other
☐ New Track

Current program name

Proposed program name, if changing

4. Approvals

		Date
Department Curriculum Committee Chair(s)	<i>Barbara W. Kipity</i>	10/13/03
Department Chair(s)	<i>Laurie Nicholson Stamp</i>	10/13/03
College Curriculum Committee Chair	<i>Joseph Domarack</i>	10-16-03
College Dean	<i>John B...</i>	10-16-03
Director of Liberal Studies *		
Director of Honors College *		
Provost *		
Additional signatures as appropriate: (include title)		
UWUCC Co-Chairs	<i>Gail S. Schuist</i>	11/18/03

* where applicable



Description of the Curriculum Change

1. *A complete catalog description with the new number, title, number of credits, class and lab hour designation, prerequisites, and an appropriately written course description.*

ECED 310 Science and Health in the Literacy-based Early childhood Curriculum

3c – 01 – 3cr

Prerequisite: Admission to the Early Childhood Education Teacher Preparation program

Designed to emphasize the need for high-quality, meaningful science and health experiences in early childhood, across a developmental curriculum. Teacher candidates will learn how to provide young children with unique opportunities to: explore phenomena, use skills of scientific inquiry, cultivate scientific dispositions, and build a foundation for understanding core scientific and health concepts.

2. *A listing of the proposed changes giving the old title and number and the new title and number.*

Title Change:

Old title – ECED 310 Integrated Curriculum I

New title – ECED 310 Science and Health in the Literacy-based Early Childhood Curriculum

3. *A listing of proposed changes giving the old catalog description and the new catalog description*

Catalog Description Change:

Old Catalog Description

Examines the sequence of cognitive development in children and the implications for instructional programs. Stages of cognitive understanding are applied to the basic components of numerical concepts and science concepts. Classroom management strategies that can be utilized in varied environments are stressed.

New Catalog Description

Designed to emphasize the need for high-quality, meaningful science and health experiences in early childhood, across a developmental curriculum. Teacher candidates will learn how to provide young children with unique opportunities to: explore phenomena, use skills of scientific inquiry, cultivate scientific dispositions, and build a foundation for understanding core scientific and health concepts.

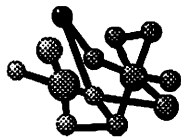
4. Justification/rationale for the change(s)

In the current Early Childhood Education program, students in Professional Sequence II are required to take, among other courses, *ECED 310 Integrated Curriculum I* (focusing on the teaching of science) and *ECED 311 Integrated Curriculum II* (focusing on the teaching of social studies, health, nutrition and safety).

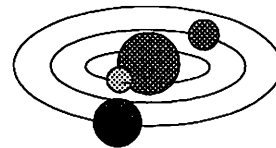
In restructuring the Early Childhood Education program of study to include the academic concentration in reading for all majors, while not exceeding the 120 cr. hr. limit, it became imperative to design a more efficient way to meet the standards of the national early childhood teacher preparation program accreditation body, NAEYC. One way to do this is to incorporate the teaching of health and nutrition into *ECED 310 Integrated Curriculum I* and integrate the teaching of safety into the new *ECED 314 Creative Experiences to Enhance Literacy Acquisition*. This integration seems logical as this three credit course, as originally designed, was to include math methods, but has evolved into a solely science-focused course. As the course content in science, health and nutrition is interrelated, this change to the course content will be only a minor change to the Early Childhood Education program of study and will not cause our students to be less-informed in this area.

Also, the new course description is in alignment with the NAEYC Standards for Early Childhood Teacher Preparation programs and standards-terminology is used to reflect this alignment.

The new title for this course more accurately reflects course content and is more appropriate considering *ECED 311 Integrated Curriculum II* has been deleted.



ECED 310



SCIENCE AND HEALTH IN THE LITERACY-BASED EARLY CHILDHOOD CURRICULUM

Course Catalog Description: ECED 310; 3 credit hours

Designed to emphasize the need for high-quality, meaningful science and health experiences in early childhood, across a developmental curriculum. Teacher candidates will learn how to provide young children with unique opportunities to: explore phenomena, use skills of scientific inquiry, cultivate scientific dispositions, and build a foundation for understanding core scientific and health concepts.

Course Prerequisites: The course is only open to Professional Sequence II Early Childhood Education majors.

TEXT: None required. Students will be expected to purchase resource books and materials in order to teach specific science and math concepts during their field experience.

Membership to at least one professional science teaching association is required. Membership forms will be made available. A signature for your professor is required to get the student discounts. Choose from the following:

National Science Teachers Association Membership \$30.00 Choose Science and Children as your journal.
Pennsylvania Science Teachers Association Membership \$8.00. Receive journal entitled the PSTA Exchange.

Council for Elementary Science International Membership \$10.00

GENERAL NATURE OF THE COURSE:

In this course, students will examine strategies for teaching science and health concepts, and design lessons that integrate science and literacy. Students will develop knowledge of how to design lessons with appropriate content and methods for young children. Students will apply this information in a four-week field experience at the end of the semester where they spend each day in a preschool or primary setting.

COURSE OBJECTIVES/OUTCOMES:

1. Participants will be able to develop and teach a series of innovative, activity-oriented lessons appropriate for young children, which integrate science and health with literacy and other subjects, using the science processes and a variety of teaching techniques. (PDE Standard ID and IE)
2. Participants will be able to work cooperatively with preschool and primary students and teachers in a school setting. (PDE Standard IIIC)
3. Participants will be able to identify ways to enhance understanding of the natural environment. (PDE Standard IE)
4. Participants will be able identify goals for teaching science and health to a diverse community of students, as well as multiple methods for assessing these goals. (PDE Standard IB and IIB)
5. Participants will be able to evaluate and critique various computer resources and technologies for teaching science and health to young children including resources provided through the Internet. (PDE Standard IIC)
6. Participants will become content experts in at least two major science areas and develop teaching plans that will convey this information to children. (PDE Standard IE)

7. Participants will be able to identify scientists that have made major contributions to in various areas of science and develop teaching strategies that allow students to examine the contributions of these people. (PDE Standard IE)
8. Participants will be aware of gender issues as related to the teaching of science and health. (PDE Standard IE)
9. Participants will be able to provide information to young children in the areas of life, physical and earth science and relate it to their own world experience. (PDE Standard IE)

PORTFOLIO ASSIGNMENTS:

Lesson Plan Unit

One of the major assignments in this course is the unit plan. You will construct a science or health unit that integrates literacy and other curricular areas. Your cooperating teacher will assign a topic from which the unit is developed and then taught during the field experience. This unit must contain a minimum of five instructional lessons and follow the format contained within the Professional Sequence II Handbook. You will be expected to research your topic using a minimum of 10 electronic resources, 10 factual adult references, and five teacher resources. At least 10 books appropriate to the level of the student should also be included in the reference section of your unit so you can use these books to supplement your instruction. This unit will become a part of your electronic portfolio therefore you want to develop a unique unit that can later be examined by potential employers.

COURSE EVALUATION:

A. Class Participation:

Many of the skills required by the outcomes can only be learned by **active** participation in class discussions, activities, investigations, and teaching situations. As it is impossible to participate without being present, attendance is mandatory. It is entirely possible to lose 10% of your grade if you are not regularly in class and actively participating.

B. Assignments and Grading (points are approximate)

Item	Total Points (predicted)	Total Points (actual)	My Score
1. Midterm Exam	100 points	_____	_____
2. Final Exam	50 points	_____	_____
3. Lesson Presentation	50 points	_____	_____
4. Lesson Plan Unit	125 points	_____	_____
5. Optional Assignment	100 points	_____	_____
- (Must complete one)			
6. Article Summaries	25 points	_____	_____
7. Participation	50 points	_____	_____

Grades will be assigned at 10% intervals.

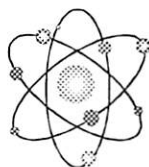
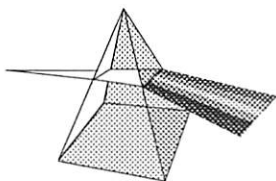
90-100% = A

80-89% = B

70-79% = C

60-69% = D

59-50% = F



COURSE OUTLINE

ECED 310

<u>Session</u>	<u>Topics</u>
1	Course mechanics; Components of Teaching Science and Health
2	Basic Process Skills, Observation in Science
3	Guidelines for creating integrated units; Gems; AIMS; Money
4	Teaching Methods; Classification; Skin Prints Article 1 DUE
5	Lesson Planning; Science and Health Units; Measurement
6	Prediction vs. Inference; Groundhogs
7	Elementary Science Programs; FOSS; DMS; STC Article 2 DUE
8	Creating an integrated theme; The Heart
9	Promoting Science and Health for all Children: Famous Scientists
10	Midterm covering all class discussions and readings as well as information provided by classmates
11	Presentation of Group Units
12	Assessment; Oceans
13	Environmental Education Curricula; Snow
14	Teaching Science in an Outdoor Setting
15	Animals in and Outside of the Classroom
16	Student Lessons
17	Student Lessons
18	Professional Organizations, Evaluation, and Wrap-up Block Exams

FOUR WEEK FIELD EXPERIENCE

RECOMMENDED READINGS

- Abruscato, J. (2000) *Teaching children science—a discovery approach*. Boston: Allyn & Bacon.
- Barba, R. (1995) *Science in the multicultural classrooms*. Boston: Allyn & Bacon.
- Carin, A. & Bass, J. (2001) *Activities for teaching science as inquiry*. Upper Saddle River, New Jersey: Prentice Hall.
- Esler, W. & Esler, K. (1989). *Teaching elementary science*. CA: Wadsworth Publishing Company.
- Funk, J., Okey, J., Jaus, H., & Sprague, C. (1985). *Learning science process skills*. Dubuque, Iowa: Kendall/Hunt Publishing Co.
- Gega, P. (1990). *Concepts and experiences in elementary school science*. New York: Macmillan Publishing.
- Skolnick, J., Langbort, C., & Day, L. (1982). *How to encourage girls in math and science*. Palo Alto, CA: Dale Seymour Publications.
- Tobin, K., Tippins, D. & Gallard, A. (1994) *Research on instructional strategies for teaching science. Handbook of research on science teaching and learning*. New York: MacMillan
- Victor, E. & Kellough, R. (1989). *Science for the elementary school*. New York, New York: Macmillan.
- Wasserman, S. & Ivany, J. (1988). *Teaching elementary science—who's afraid of spiders?* New York: Harper & Row Publishers.

Please keep a written record of the number of points you have earned and the number of points that were possible. Some quick division of the two running totals will give you your grade percentage in class so you will know what your grade is at all times.

C. POLICY ON MISSED EXAMS AND SUBMISSION OF LATE ASSIGNMENTS:

Written assignments must be turned in at the beginning of class on the day they are due. A 10% penalty will be assigned for every late day, beginning immediately after that class period.

A written doctor's excuse must be provided to make up any assigned work or tests.

ACADEMIC INTEGRITY POLICY:

This course will follow the letter and the spirit of IUP's Academic Integrity Policy. The complete policy can be found in your undergraduate catalog.

ECED 310 ASSIGNMENTS

1. **Article Summaries-** The purpose of this assignment is to familiarize you with journals that will be instrumental in your science and health teaching. Choose one article from the journal, *Science and Children* (2001-2003). This article should give practical information on how to teach a particular science or health concept. In a 2-3 page summary, discuss the following items: 1) What was the article about? Discuss the teaching situation and describe the teaching ideas that were presented. 2) Give your professional opinion as a future teacher concerning the article. Did the ideas presented seem creative to you? Would the ideas be adaptable to other grade levels? Was the preparation for following these ideas reasonable? What costs would be involved? Add any other comments you might feel appropriate. Include appropriate bibliographical information using APA Style.

In order to keep up with current events in science and health, it will be necessary to have science information at your fingertips. Therefore, the second article will be from the journal *Discover* (2001-2003). As in the first article, summarize the information that was presented and tell why this article was of interest to you. Then discuss how you would use this information in the classroom. What kind of a unit would it be appropriate for? How would you deliver this information? What activities might be appropriate? Are there any children's books that would be appropriate? Add other comments you feel are appropriate. Also include a full bibliography using APA Style.

You are welcome to submit these assignments electronically, anytime before the deadline.

2. **Group Unit** - You will have the opportunity to design a group unit with your peers. After the topic has been determined, 15 to 30 minutes at the beginning of each period will be used to discuss and develop the unit. Units will follow the format in the Professional Sequence II handbook. One lesson from the unit will be presented to the other members of the class on the day scheduled.
3. **Lesson Presentation-** You will have the opportunity to teach a lesson from the unit you have prepared to teach out in the schools in front of your peers, first. You will be responsible for at least $\frac{1}{2}$ hour of instruction and will teach to the members of the class as if they were the children you will be teaching in your field experience. Lesson plans for all students will be provided. Criteria for evaluation will include: Preparation, Organization, Enthusiasm, Appropriateness to Grade Level, Knowledge of the Topic and Overall Effectiveness.
4. **Unit-** Each student will design and implement an integrated unit around a central science or health topic incorporating literacy and other subjects areas as well. This unit will be taught during the field experience. The students will work with the cooperating teacher to decide on the topic and time frames. *Each unit will be comprised of a minimum of 5 instructional lessons regardless of what is actually taught during the field experience.* You and your cooperating teacher will also decide how these lessons will be used, as well as inclusion of non-instructional days for review, testing, guest speakers. The format for the unit and the lesson plans is included in your Professional Sequence II handbook. It is expected that you will be teaching most every day in the field, therefore, an additional unit or plans may be required.
5. **Class Contributions-** Specific topics of interest are listed on Days 6, 8, 12, 14 and 15. You will be expected to contribute to the classes on

these days. First, if you wear an article of clothing or jewelry with the specific theme for that day, you will earn 5 points. You will earn another 5 points if you bring in an article of interest on the topic, an activity to do with the class, an appropriate snack for that day's theme, or a children's book that would go along with the theme (only one that is new or excellent). These points cannot be made up if you aren't in class or if you have forgotten your items.