

ESCI 4420
Science for Early Childhood Education
Fall 2005

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Course Description

Welcome to ESCI 4420: Science for Early Childhood Education. I am very excited to work with you as we learn about teaching elementary school science. I have designed this course in ways that will allow you to practice and question different aspects of science teaching and learning. Several questions will guide this exploration, including:

- How do students come to understand ideas and processes in science?*
- What classroom conditions facilitate students' science learning?*
- What do teachers need to know and do to create such conditions?*

Through this course, I hope to facilitate your learning by providing opportunities for you to 1) teach and learn science through hands-on activities with your peers and elementary students, 2) observe, discuss, and reflect on your experiences in watching others and yourselves teach science in a safe environment, 3) develop a repertoire of science teaching 'tricks of the trade,' list of resources to draw from in the future, and appropriate expectations for yourself as a science teacher.

<u>Assignments</u>	<u>% of Grade</u>
Weekly Assignments	50%
Field Experience Activity Reports	15%
Participation	10%
You-Teach Project (count as final)	25%

A = 90-100%, B = 80-89%, C = 70-79%, D = 60-79%

Expectations (often via Rubrics) will be discussed and used in grading all assignments. Please help me to clarify anything that is unclear concerning the directions, expectations, or grading requirements **before** turning in the work.

Weekly Assignments: These will consist of a variety of tasks, including your 'science visual autobiography.' Other assignments might include 'case reactions,' lesson plans, etc. The grades may be marked $\sqrt{+}$, $\sqrt{}$, or $\sqrt{-}$ ($\sqrt{+} = 100\%$ $\sqrt{} = 85\%$ $\sqrt{-} = 65\%$), or with rubrics showing 'out of 10' (1x grade) or 'out of 20' (2x grade).

Participation: This percentage of your grade (10%) involves a combination of attendance and my perceptions of the contributions you have made to the group. I will be aware that contributions can be made in many ways and involve not just instructor-student interactions but also student-student interactions. In a similar way, the spoken contributions during class discussions are not the only way to promote positive learning environments. Key questions, written feedback, and feedback from your peers on your contributions to group projects can all constitute 'participation.'

You-Teach Project (YTP): You will be responsible for presenting a mini-unit in pairs that will encompass the second half a class when we return from the field experience. It will involve leading a hands-on activity, presenting a demonstration, and leading discussions about the science concepts as well as how to teach those ideas.

Course Materials

- Georgia Professional Standards (pfs) – you are responsible for getting a copy of the science standards for 1st – 5th into your notebook – it is available at on the internet at [www](http://www.gadoe.org).
- Selected readings available at the OIT on course reserve (Calkin, ESCI 4420) (to be announced).

Attendance

Class participation is a vital component of this course. If you are not in class, you are unable to participate in course activities. It is also important that you arrive on time and are ready to begin. You are expected to be present for every class meeting. I reserve the right to lower a final grade by one or more letter grades if you exceed one unexcused absence or if tardiness becomes problematic. An absence will be considered excused if you provide written documentation for the absence. Absences that may be excused include illness, illness or death in your family, jury duty, or a personal crisis. All work missed during any absence must be made up. It is the responsibility of the student to contact me with written documentation for any absence. It is also the responsibility of the student to contact me regarding content missed in class. In the event of illness, accident, or other emergency, when circumstances permit, you should make contact with me, preferably before class takes place. If I cannot be reached in person or by phone, you should email me at jcalkin@uga.edu.

Late work: Depending on the assignment...some work will not be accepted late while others will have points deducted for work turned in late.

The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary

All academic work must meet the standards contained in the “A Culture of Honesty” (<http://www.uga.edu/ovpi/honest/acadhon.htm>). Students are responsible for informing themselves about those standards before performing any academic work.

Calendar

<u>Date</u>	<u>Day</u>	<u>Topic</u>	<u>Assignments Due</u>
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1/10	Tuesday	Introductions	
1/12	Thursday	Science Process Skills – both sections w/ Jamie	
1/17	Tuesday	Science Process Skills	VISUAL SCI AUTOBIO
1/19	Thursday	Physical Science – motion and sound	
1/26	Thursday	Physical Science – light and electricity	
1/27	Friday	Phys. Sci. (motion) - Simple Machines; trip to Holsenbeck 8am-12pm	
2/3	Thursday	Biology – in room 220 with Dr. Tippins	
2/4	Friday	Biology	
2/9	Thursday	Ecology	YTP
2/10	Friday	Discrepant events	YTP

2/12-3/10 *In the Field*

3/13-3/17 *spring break*

3/21	Tuesday	Debriefing Field Experience, Sharing Field Activity	Field Activity Due
3/23	Thursday	Earth Science	YTP
3/28	Tuesday	Earth Science – Water Festival – Athens Tech. 8am-11:30am	
3/30	Thursday	Oceanography	YTP
4/4	Tuesday	Field Trips – Both sections, campus trip (Natural History and Art Museums)	
4/6	Thursday	Field Trip – Both sections meet at Sandy Creek Nature Center	
4/11	Tuesday	Garden Work	YTP
4/13	Thursday	Garden Work	YTP
4/18	Tuesday	Project Wild Training – both sections, be ready for outside activities	
4/20	Thursday	Project Wild Training – both sections, be ready for outside activities	
4/25	Tuesday	Controversial Issues in Science Teaching	YTP
4/27	Thursday	Science Celebration	