

NCLC 375 (B03) Teaching in the Sciences (3 Credits)
Thursdays 1-4pm
Summer 2005

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Required Texts and Readings

Chapter 9 “Scientific Inquiry and How People Learn,” *In How Students Learn: History, Mathematics, and Science in the Classroom* (2005) by the Board on Behavioral, Cognitive, and Sensory Sciences and Education (BCSSE), available at www.nap.edu/books/0309074339/html/.

Additional readings to be given in class

Course Description

This course, Teaching in the Sciences, provides experiential learning credits as well as some science teaching theory. University students will delve into a variety of activities related to the practice of science teaching throughout Summer Session B and the Summer Enrichment Camps from July 18-22. While considering and analyzing current ideas in science teaching, students will have the opportunity to design, modify, and evaluate their own curriculum for a science-, technology-, or math-based activity for the camps. Students will also serve as camp counselors, or “mentors,” for the campers to gain experience in organization, discipline, and diplomacy at various levels (with university personnel, the campers, their parents, etc.). The course and the camps will both incorporate active learning methods to promote New Century College’s competencies as well as an enjoyable learning environment.

Since this is an experiential learning community, attendance at the Summer Enrichment Camps on July 18-22, from 8am to 5pm is required. Please let me know immediately of any conflicts so that we can find a solution. A final portfolio which documents your learning during the course and the camps is also mandatory to complete the course.

By the end of this course you should:

- ✓ Gain “real world” practical experience in designing, developing, executing, and evaluating math-, technology-, and science-based curricula for children in 4th to 8th grades;
- ✓ Develop skills necessary to plan, prepare, and realize a children’s event;
- ✓ Learn to share your enthusiasm for math, science, and technology with 4th to 8th graders, decreasing “science-phobia” in students of all ages.

General Policies

1. **Course philosophy.** This course is an overall introduction to the practice of science teaching. It will be a challenging, even frustrating, but also an enjoyable experience, as you develop the necessary skills for teaching. With your earnest effort and participation throughout the course and the camps, you should easily be able to achieve a good grade in this course, as well as have fun.

2. **Attendance and participation.** Attendance and participation are so important that they make up a significant portion of the grade in this course. This is NOT a lecture-based course. Please come to class prepared to discuss, ask questions, and otherwise contribute to the exchange of ideas and information. If there are extenuating circumstances, please talk to me about it beforehand or afterwards if there is a medical reason or other emergency. Of course, the Camps are the culmination of this course, and your efforts there earn your experiential credits. Except in extremely special cases, Camp days can NOT be missed.
3. **Camp activity curriculum assignments.** The goal of this course is for students to gain practical experience in developing curricula for science, technology, and math activities. More details on these assignments will be given as the course proceeds.
4. **Journal writings.** After each day of camp, you should write a reflective writing of at least 1½ -2 pages (typed or written) that should include your opinions on the day's activities, what you learned, your observations, and any unresolved questions that you may still have. This should not just be an itinerary of your day, but contain insightful reflection of the execution of the day's activities. These journal writings will be submitted with your final course portfolio.
5. **Reading reflections.** A 1-2 page overview and summary of the assigned readings should be written and included in the course portfolio.
6. **Open door policy.** You can discuss in person or through e-mail any question or concern you have regarding this course or the camps without worrying about it affecting your grade.
7. **Common courtesy.** Please do not be late for class or the Camp. Please turn off cell phone ringers during class and the Camp. Campers should get your undivided attention. Anyone taking a personal call during Camp (except during breaks/lunch *away* from the campers, and emergencies) will lose 10% off their grade. Please respect each other and the campers during class and Camp.
8. **Grading**

Your experiential learning grade is determined as follows:

 - 40% Active participation and efforts during Camp
 - 20% Camp activity curriculum
 - 10% In-class participation and assignments
 - 30% Final course portfolio and Camp journal