

Interession 2000

EDUC 476 - 4
Designs for Learning: Natural Sciences
(K-12)
E01.00

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Tuesdays & Thursdays 17:30-21:20

PREREQUISITE

Educ 401/402

Note: This course is primarily designed for elementary teachers, but the instructor will accommodate secondary teachers.

COURSE DESCRIPTION

This course will focus on the "three Rs": Reflection, Research, and Repertoire.

Through the course readings, writing, and in-class discussions and activities, students will *reflect* on questions such as:

- How do my experiences as a student of science affect my teaching of science?
- What is science, and why do we teach it?
- Do I need to know all the answers to teach science effectively?
- How do students best learn science?
- What are some of the alternative ways of teaching science?
- How do the IRPs affect my science teaching?
- How can I best understand whether students have learned what I intended?
- How can I design my sciences activities to anticipate students' cultural and individual differences?

Students will also be encouraged to do two kinds of *research*. First, they will be asked to inquire into their own teaching of science. They will also be asked to design science activities that enable students to do science research.

Finally, students will be expected to expand their *repertoire* of instructional and assessment techniques, and their resources to teach science.

REQUIREMENTS

1. Students will individually design a science theme or unit of study (10 to 20 hours of instructional time), appropriate to the age level you will be teaching. This plan will include lesson plans, assessment instruments, and resources. It will also clearly articulate the educational value of the unit, the learning objectives, and their relative importance - 50%
2. Small groups of two or three students will lead the rest of the class in a science activity lasting 45-60 minutes - 20%
3. Student will write one short reflection (250 to 500 words) on each week's activities or readings (7 in total) - 20%
4. The instructor will assess your participation in this class. The emphasis will be upon how well students helped themselves and other students to learn in the course - 10%

REQUIRED READINGS

Custom courseware package

Additional readings and resources will be placed on reserve in the library and on the course web site.