SIMON FRASER UNIVERSITY

Summer Semester 2002

EDUC 416 - 4

Designs for Learning: Secondary Science

D01.00

Monday 13:00-16:50 in EDB 7500F

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PREREQUISITE

Educ 401/402

DESCRIPTION

This course is designed for prospective and practising secondary school teachers who wish to explore the fundamentals of the learning/teaching process as it applies to science. The course will draw from the latest research in science learning, and will show how such findings may be used in the classroom. You are expected to become familiar with and confident in the use of a variety of teaching strategies including the use of hands-on work, writing, role play, and a number of ways of using group work. You are also expected to prepare yourself for dealing with a range of classroom issues arising, for example, from feminist and anti-racist research traditions. Finally, you will prepare yourself for becoming lifelong innovators in science education, learning how to reflect on their practice.

OBJECTIVES

On completion of the course it is hoped that you will feel more at ease with teaching science, be able to deal confidently with the prescribed curriculum, and be able to plan teaching and learning science instruction within a consistent framework.

ASSIGNMENTS

1. Critical challenge Assignments

Working in a small group, you will design two or more lessons that foster critical thinking.

2. Group lesson and lesson opener

Working in a small group, you will prepare and present a short (15 minute) lesson opener and, on a separate occasion, a full lesson (about 45-60 minutes).

3. Self-evaluation of lesson and lesson opener

Incorporating feedback from your peers, you will write a critique of your lesson and lesson opener.

4. Unit Planning Assignment

The object of this assignment is to ensure that you obtain some experience in planning a set of learning experiences in science.

5. Ongoing conversations

Using Knowledge Forum™ software you will engage in "ongoing conversations" in which you continue to make sense of learning experiences in the course, readings, and your practice between classes. The goal is to enable you to relate theory to practice. Knowledge Forum will also provide you with one example of a tool for distance learning. Only basic familiarity with computers will be assumed.