

JIMON FRASER UNIVERSITY

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Summer Semester 2000

**EDUC 476 - 4**  
**Designs for Learning: Natural Sciences**  
**(Secondary)**

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Thursdays 13:00-16:50

**D02.00**

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**PREREQUISITE**

Educ 401/402

**COURSE DESCRIPTION**

This is an introductory course in the curriculum and methodology of science education. It examines a number of strategies and resources for teaching. The course will make extensive contact with the research literature on science learning and teaching, but always looks at this research from a practical point of view. The course will use a combination of lectures, discussion, and hands-on activities, and may include one or two field trips.

Topics to be covered:

- Introduction/Science and Scientific Inquiry for understanding
- Conception and models of teaching and learning/Multiple Intelligences
- Strategies for Science Discourse
- Journal writing and research reporting
- Novel teaching and learning ideas
- Explanation, evidence, relevance
- Science from a historical perspective
- Computers in science education
- Science-Technology-Society education
- Assessment

**OBJECTIVES**

Students will develop skill at unit planning in science; at critically examining unit plans, taking their knowledge of research on teaching and learning science into account; will practice their teaching skills; and will engage in science activities.

**REQUIREMENTS**

- Test (essay questions, after about 8 weeks) - 20%
- Unit plan - 30%
- Presentations and participation in class activities - 30%
- Small assignments to follow up on class work (weekly) - 20%

**TEXTBOOK**

Ebenezer, J.V. & Hagerty, S.M. Becoming a Secondary School Science Teacher. Prentice-Hall Inc., 1999. ISBN 0-02-331312-9.