BCIT®

A POLYTECHNIC INSTITUTION

School of Manufacturing Electrical and Industrial Processes
Program: Technology Teacher Education

Course Outline

Course Number: TTED 4071
Course Name: Tech Ed Applications

Start Date:	05/09/06				**End Date:**	10/11/06			
Total Hours:	10	**Total Weeks:**	10		**Term/Level:**	3	**Course Credits:**	1.5	
Hours/Week:		**Lecture:**	1	**Lab:**	**Shop:**		**Seminar:**		**Other:**

Prerequisites: All Foundations and Core 1 courses **Prerequisite for Level 4**

Course Description

The Tech Ed Applications course examines a wide range of topics related to teaching technical and vocational subjects in schools. This course examines a selection of the relevant scholarly literature in the field. One focus will be the development and preparation for delivery of an activity that will satisfy the outcomes of the provincial technology education Instructional Resource Packages or the new Workplace Program Guides.

Evaluation

Marks will be apportioned as follows:

Research Paper	35%
IRP – Workplace Guide Activity	30%
Discussion Participation	15%
Final Exam	20%
Total	100%

Course Learning Outcomes/Competencies

Upon successful completion, the student will be able to:

- Provide a historical and cultural context to frame the delivery of technology education courses in the K – 12 school system of British Columbia.
- Articulate an understanding of the role played by gender, ethnicity and socio-economic class in their perceptions and adoption of various technologies.
- Relate the prescribed learning outcomes in the Technology Education 8 – 10 IRP to a selection of readings provided in the course.
- Provide examples of age appropriate activities that are consonant with the above objectives.
- Differentiate between technology education and vocational education.

Verification

I verify that the content of this course outline is current.

Authoring Instructor — Date: Aug 31/06

I verify that this course outline has been reviewed.

Program Head/Chief Instructor — Date: Aug 31/06

I verify that this course outline complies with BCIT policy.

Dean/Associate Dean — Date: 2006/08/31

Note: Should changes be required to the content of this course outline, students will be given reasonable notice.

Instructor(s)

Office Location: SW9 201-H

Office Hrs.:By app't

Office Phone:432 8365

E-mail Address: alex_rosenthal@BCIT.ca

Learning Resources

Required: **All handouts required will be available in the preceding lecture.**

Recommended:

Information for Students

Assignments: Late assignments, lab reports or projects will be devalued 10% per day late. Assignments, lab reports or projects must be done on an individual basis unless otherwise specified by the instructor.

Makeup Tests, Exams or Quizzes: There will be **no** makeup tests, exams or quizzes. If you miss a test, exam or quiz, you will receive zero marks. Exceptions may be made for **documented** medical reasons or extenuating circumstances. In such a case, it is the responsibility of the student to inform the instructor **immediately**.

Ethics: BCIT assumes that all students attending the Institute will follow a high standard of ethics. Incidents of cheating or plagiarism may, therefore, result in a grade of zero for the assignment, quiz, test, exam, or project for all parties involved and/or expulsion from the course.

Attendance: The attendance policy as outlined in the current BCIT Calendar will be enforced. Attendance will be taken at the beginning of each session. Students not present at that time will be recorded as absent.

Illness: A doctor's note is required for any illness causing you to miss assignments, quizzes, tests, projects, or exam. At the discretion of the instructor, you may complete the work missed or have the work prorated.

Attempts: Students must successfully complete a course within a maximum of three attempts at the course. Students with two attempts in a single course will be allowed to repeat the course only upon special written permission from the Associate Dean. Students who have not successfully completed a course within three attempts will not be eligible to graduate from the appropriate program.

Course Outline Changes: The material or schedule specified in this course outline may be changed by the instructor. If changes are required, they will be announced in class.

Advancement: Students who fail three or more courses in a term cannot advance to the next term and may be asked to discontinue from the program.

Assignment Details

Activities

A list of books drawn from the scholarly literature and relating to a variety of technological perspectives has been assembled. While these books are not all specifically directed to technology education, most are directly related by virtue of their subject matter. A concerted effort has been made to select titles by Canadian authors or scholars whose contribution to the field is internationally recognized. In a sense, these books form part of the canon of Western intellectual thought relating to technology broadly defined. While some of these readings are provocative, others intensely orthodox in presentation. In all cases, the research presented is thoroughly documented.

As stated in the course outcomes, it is hoped that this exercise will introduce you to various academic perspectives on the role technology plays in shaping our society. As a teacher in the public school system it will be important for you to be able to articulate to students, parents and administrators why you think a particular activity or a particular technology belongs in your program or school. Not all of this audience will have the same appreciation or understanding as you. As such, this exercise will help to clarify in your own mind where you stand in relation to the competing perspectives.

Research Paper

After reading one of the books in the reading list, you will be asked to write a major term paper that considers the implications of the theme(s) in the book in relation to the teaching of Technology Education in the K-12 school system in British Columbia. The double spaced paper should range from seven to ten pages in length and follow either Chicago or APA protocol for quotes and footnotes. This is <u>not</u> a book report. I'm interested in seeing evidence in your paper that you have thought about the material presented in the context of teaching. Do you agree or disagree with the arguments of the author? If so, why - if not, why not? Document your evidence, distinguish between fact and opinion.

In each class you will be provided with a reading from one of the books on the list. This reading will be either an introduction, important chapter or concluding chapter and will form the basis for discussion in the following class. As some of these books are rather large I suggest you get started as soon as possible. Most of them are available in public libraries throughout the lower mainland which should alleviate the pressure to purchase expensive texts. As many of the suburban libraries will have to get these books via inter-library loan, my advice is to begin the process ASAP.

Papers are due the October 27, 2006 at 5:00pm.

Instructional Resource Package / Workplace Program Guides Activity

You will be asked to provide a unit plan that describes in technological terms the speed/torque reduction/multiplication mechanisms used in the machine developed in the 100 hour project. Each team will be required to produce one such package that includes the following:

1. Drawings or sketches that would be suitable to explain the methodology your team used in selecting the drive components. A review of the mathematical calculations would probably be appropriate.

2. A lesson plan explaining the relationship between horsepower and torque that is tied directly to prescribed learning outcomes from the IRP.

3. A "related topics" summary of ideas that could be turned into activities that teach the above principles on a more modest scale. Eg. Lever arms, catapults, elastic band cars.

4. A presentation and assessment/evaluation framework that is sympathetic to the goals of the Technology Education 8 – 10 IRP.

Due date: Dec 8, 2006

Schedule

Week of/ Number	Outcome/Material Covered	Reference/ Reading	Assignment	Due Date