CONTINUING CAREER GROWTH 1980-81

TECHNOLOGICAL PROGRAMS FOR PART-TIME STUDENTS

BCIT

Telephone Contact
for Information and Program Consultation

0830–1630 hours, normal working days
(604) 434-5734 Locals 204/205

1630–2030 hours, while classes in session
0830–1230 hours, Saturdays
(604) 434-5741, 434-5753, 434-5755

CONTINUING CAREER GROWTH 1980-81

BCIT BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY
3700 Willingdon Avenue, Burnaby, B.C. Canada V5G 3H2 Phone: (604) 434-5734

CALENDAR

1980

January

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IMPORTANT DATES

August 18, 19, 20, 23, 25, 26, 27 ... Extended summer Registration hours
(see page 3)

FALL 1980 (Term 1)

August 29 ..... Term 1 registration deadline
September 2 to 4 ..... Technology advisors available
September 2 to 6 ..... Registration if space available
September 8 to 11 and 13 ..... Commencement of classes
September 20 ..... **Deadline for refund for Term 1 courses**
* October 13 ..... Thanksgiving
* November 11 ..... Remembrance Day
November 26, 27 and 29 ..... Last session for Wednesday, Thursday and Saturday 12 week classes
December 1 ..... Last session for Monday 12 week classes
December 2 ..... Last session for Tuesday 12 week classes
December 11 ..... Last night for late office hours (see page 3)

WINTER 1981 (Term 2)

December 30 ..... Term 2 registration deadline
January 5 to 8 ..... Technology advisors available
January 5 to 9 ..... Registration if space available
January 12 to 15 and 17 ..... Commencement of classes
January 24 ..... **Deadline for refund for Term 2 courses**
March 30 to April 2 and 4 ..... Last session for Term 2 (12 week classes) and Term 1 (24 week classes)

SPRING 1981 (Term 3)

March 27 ..... Term 3 registration deadline
March 30 to April 4 ..... Registration if space available
April 6 to 9 and 11 ..... Commencement of classes
April 17 ..... Good Friday
* April 20 ..... Easter Monday
April 21 ..... **Deadline for refund for Term 3 courses**
May 11 to 14 and 16 ..... Last session for Tuesday, Wednesday, Thursday and Saturday 30 and 18 week classes
* May 18 ..... Victoria Day
June 30 ..... Last day of classes

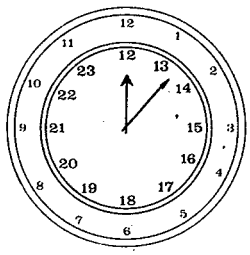
* Class may be held on a holiday at the discretion of the students and instructors.

GENERAL INFORMATION

BCIT's offerings in the areas of business, engineering and health technologies for part-time students are detailed in this calendar.

Hours

Note: BCIT uses the 24-hour clock.



Academic terms:	Term 1	(Fall)	September to December
	Term 2	(Winter)	January to April
	Term 3	(Spring)	April to June

From September 1980 through June 1981 while classes are in session the registration office will be open from 0830 to 2030 Monday through Thursday; to 1630 Friday; and 1230 Saturday (we close at 1630 from December 11 to January 2).

From July 2 until August 15, office hours are, Monday through Friday, 0830 to 1630. From August 18 through August 29, office hours are:

August 18	0830–2030	August 25	0830–2030
August 19	0830–2030	August 26	0830–2030
August 20	0830–2030	August 27	0830–2030
August 21	0830–1630	August 28	0830–2030
August 22	0830–1630	August 29	0830–1630
August 23	0830–1230		

Registration

The Division of Continuing Education and Industry Services (CEIS) courses are taught at a level which assumes students have completed secondary school. There are also specific prerequisites or special conditions for some of the courses. These are included with each course description in this calendar. In general, registration is on a first-come, first-served basis.

To Register

Complete a registration form and either mail or bring it to the registration office. Do not mail applications any later than August 18 to allow time for processing prior to the start of classes.

Fees must accompany registration form.

When student fees are to be paid by the employer, written authorization on company letterhead must accompany registration form.

Students must register and pay fees for the second term of a two-term course by November 22, 1980.

Late Registration

After the first two sessions of a course, students must have written permission of the instructor before registration will be accepted.

Cancellation and Restricted Enrolment

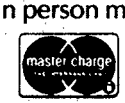
The institute will make every effort to offer all courses as listed in the calendar. Nevertheless, the institute reserves the right to limit enrolment, to select candidates, to cancel courses, to combine classes or to alter time of instruction without prior notice.

When a course is cancelled, students must fill in a refund form or transfer fees already paid to another course.

Fees

Total Hrs.	Course Format	Units of Credit (if granted)	Fee
18	6 weeks, 1 night/week Weekend, 2½ days	0.5	$ 40
36	6 weeks, 2 nights/week 12 weeks, 1 night/week 14 weeks Downtown, 1 night/week 7 weeks Downtown, 2 nights/week Weeklongs (5 days)	1.0	$ 79
54	18 weeks, 1 night/week 10½ weeks Downtown, 2 nights/wk	1.5	$118
72	12 weeks, 2 nights/week 24 weeks, 1 night/week	2.0	$158
90	30 weeks	2.5	$197

A basic price of $2.19 per hour will be used when pricing a part-time day enrolment. Students must pay for their fees by mail with a cheque or money order. Students paying in person may pay by cash, cheque, money order, Master Charge or Visa.



A $10 charge will be added for any cheque returned marked NSF.

Special fees will be set for courses having high instructional cost, special course format or small registration. Where possible these special fees will be included in the flyer published one month prior to each term's start.

Refunds

Students who withdraw from a regular evening course are eligible for a refund only if they have submitted an "Application for Refund" form. This completed form must be in the CEIS office by 1230 Saturday of the second week of classes.

A charge of $10 per course will be deducted for refund processing when students withdraw.

Fees for some special courses are non-refundable and others have a refund deadline which may be two weeks prior to the start of the class. Check your admission slips upon registration.

An official course receipt is mailed out for income tax purposes by the Finance Office in January and February.

Financial Aid for Part-Time Students

All students carrying a course load of less than 60 percent of a full-time program, or students enrolled in full-time courses of less than 26 weeks may apply for assistance from the following sources.

B.C. Student Assistance: Special Assistance Program

This program is intended to help people retrain or upgrade existing skills. In keeping with the non full-time student criteria, this program is not designed to provide funds to cover normal maintenance but rather to help with expenses which are a direct result of the applicant taking the course of studies. This includes tuition and book charges, and in some cases, extra transportation expenses.

The maximum grant available to any one student is $150 a term or $300 an academic year.

B.C. Student Assistance: Stipend for Health Students

Subject to government approval, students enrolled in a full-time, short-term upgrading program in a health technology may apply for a health stipend. This program can provide up to $50 a week.

The Harry H. Stevens Memorial Fund

The Kiwanis Club of Vancouver has established this assistance fund at BCIT. To be eligible, applicants must demonstrate financial need, be a part-time student upgrading existing skills or retraining, and a B.C. resident for at least one year prior to application. Special cases who do not meet all these criteria will also be considered. Application forms and further details are available from the Student Financial Services office.

Pacific Association for Continuing Education Bursary Fund

The association invites part-time and/or short-term adult students to apply for bursary funds. Awards of $50 to $100 may be made for any one period of study.

Recipients are eligible for only one award. Write to: The Bursary Committee, Pacific Association for Continuing Education, c/o 2832 W. 36th Avenue, Vancouver, B.C., V5N 2R1

The Soroptimist Club of Vancouver Training Award

The winner of the Vancouver club award of $500 becomes eligible to compete for the Regional Soroptimist Award of $1,200 and the McCall Life Pattern Fund Training Award of $2,500. The Vancouver club may make additional local awards to runners-up.

This award is intended to help mature women upgrade their job skills or retrain for entry or re-entry into the work force. To qualify, the applicant should be over 30, the head of a household or have a financially dependent family; and completing an undergraduate degree, entering vocational or technical training. Both full-time and part-time students may apply. For details and to apply, contact the Student Financial Services office before January 15.

Program Consultation

Continuing Education Program Consultants are available to help you select appropriate courses and plan programs of study to meet your needs. For an appointment phone 434-5734, local 204.

Counselling Services

The BCIT Counselling Centre provides a wide range of professional services in a friendly, confidential atmosphere to any BCIT student or prospective student in need of assistance:

- Personal Counselling
- Academic Counselling
- Career Counselling

Office Hours: Monday to Friday, 0800 to 1630 in room 2N205. Appointments recommended. Phone 434-5734, local 327 or for evening appointments phone the Counselling Centre at 434-5736.

Career Search Workshops

These four session workshops are designed for adults who have been in the work force at least two years and who wish to examine their career path and lifestyle in terms of direction and satisfaction.

The workshops include: standardized testing, exploration of career training opportunities, educational resource materials, and discussion. Participants will be encouraged to clarify their interests, values and abilities, to specify goals and to develop plans of action.

The six workshops planned for terms 1 and 2 are limited to 15 applicants each and are scheduled Thursdays in the Counselling Centre from 1845 to 2145 hours. Registration is handled through Continuing Education.

Starting dates for these four-session workshops are: September 18; October 16 (for women only); November 13; January 22; February 19; and March 19. The fee for each is $65, and includes tests and materials.

Certificates and Diplomas

Throughout this calendar suggested programs of study leading to 15-unit certificates in the business, engineering or health technologies are outlined.

Students who wish to change any program to better meet their own needs must have the program approved in advance by a program consultant. A student who has already earned a certificate and wishes to obtain a higher level certificate must also have a program outlined and approved in advance.

A student must apply for an approved program in a written submission showing the 15 units of proposed courses. Send to: Program Consultant, Continuing Education, BCIT, 3700 Willingdon Avenue, Burnaby, B.C., V5G 3H2.

Students with a National Diploma of Technology, a university degree, college diploma or similar standing must apply instead for a special certificate. See index.

Students with a National Diploma of Technology are ineligible for a technician certificate or second national diploma in the same technology option.

Business, Engineering Technician, or Health Care Certificate
(minimum 15 units of credit). Outlines of these certificate programs in the various technologies are given throughout the calendar.

Senior Engineering or Senior Business Certificate
(minimum 30 units of credit). These certificates will be awarded upon com-

pletion of a minimum of 15 units of study on an approved program beyond the first level certificate.

The courses required for a senior certificate are indicated for some technologies only. A student should seek assistance from a program consultant and have a program approved in advance.

National Diploma of Technology

(minimum 45 units). A student who has completed the senior level certificate and has extensive related work experience and a good academic record may make application for a program of study leading to a national diploma. At least 15 units of additional **approved course** work beyond the senior level is required to meet diploma requirements.

Combined Business and Engineering Certificates

The Continuing Education Department will award combined business and engineering certificates to students who successfully complete at least 15 units of pre-approved study drawing courses from both areas. The object of these certificates is to provide a program of studies with a general business base but flexible in the branch of engineering of interest to each individual.

Programs for Graduates

Special Certificate

A student who has graduated from BCIT with a National Diploma of Technology or who has a university degree, college diploma or equivalent may receive a special certificate when 15 units on a pre-approved program have been completed. This certificate recognizes that an individual has completed 15 units (540 hours) of study in addition to previous educational qualifications. Transfer credits will not be recognized towards the 15 units. The special certificate does not indicate a level along the route of our regular certificate program.

A student having a special certificate may request that the same credits obtained apply toward a National Diploma of Technology. At least 24 units of study at BCIT are required for the diploma. Students should apply in advance to arrange such a program.

Course Credit

The basic measure of course credit is a UNIT, which normally is awarded for three classroom hours per week for 12 weeks, a total of 36 hours of study.

Transfer Credit

Transfer credit is a means whereby a student may acquire recognition for academic work completed at another recognized post-secondary institution AND NOT USED AS PART OR WHOLE REQUIREMENT FOR A DIPLOMA OR DEGREE WHICH HAS BEEN CONFERRED OR GRANTED. The course work for which the student is requesting transfer of credit must be related to the student's program of studies at BCIT.

While transfer credit will be recorded only after the student has completed at least one unit of course work at BCIT, assessments with respect to beginning courses and exemption from prerequistes can be made prior to completion of one course.

Transfer Credit Application Procedure

A student who wishes transfer credit must: 1) apply in writing to the program consultant; 2) enclose an official transcript and description of the course completed, indicating the number of hours of classroom and laboratory study and topics covered (excerpts from official calendars may be acceptable); 3) indicate towards which certificate the credit is to be applied; and 4) propose a complete 15.0 unit program, including the transfer units requested.

Challenge Credit

Students may acquire credit recognition for knowledge and skills gained through self-study and/or work experience. By challenging a course students claim they already have the knowledge and abilities to be learned from taking a BCIT course. Because of the learning format of some courses, not all are considered challengeable.

Where approval has been granted to challenge a course, a formal evaluation procedure will take place. The student's abilities will be assessed through a written and/or oral examination, research paper or other means as the evaluator sees fit. A student may challenge a course only upon completion of 10 units of credit at BCIT. Only five units of challenge credit will be allowed for each certificate program.

Challenge credit is not considered as work completed at BCIT but when a course is successfully challenged the number of units required for a certificate will be reduced. If a student is successful a "C" (for credit) will be indicated on the transcript. If unsuccessful, nothing will be indicated.

Fee to challenge a course must be paid before the formal evaluation takes place.

A student may challenge a course by applying in writing to: Program Consultant, Continuing Education, BCIT, 3700 Willingdon Avenue, Burnaby, B.C., V5G 3H2.

Examinations

Policy on Examinations

In general, assessment is based on mid-course exams, final exams, plus projects or other oral and written work. No rigid form of evaluation is prescribed except that it should provide some measure of the student's comprehension and application of the knowledge learned and distinguishes between superior and passing students.

A final grade will not be assigned unless a student has attended a minimum of 50 percent of classes and satisfactorily completed work assigned.

A student is required to take the examination for each course at the time set by the institute. Students unable to write exams due to special circumstances should first contact their instructor. Then, if necessary, consult the head of the appropriate CEIS department: Business, Engineering/Core or Health.

External Examinations

We will attempt to cooperate with any part-time student who cannot write an examination because of absence from the city, by allowing the student to write the exam at a set time in another centre under an invigilator acceptable to the institute.

Auditing

A student may, with permission of the instructor, audit a course. An audit student is not formally evaluated and does not write examinations. However, the student is expected to take an active part in the classroom discussions and laboratory exercises, maintain satisfactory attendance, and will pay the full course fee.

An auditing student will not receive credit for the course, but will receive a Statement of Marks with "Audit" indicated.

Students who wish to change their registration status to "audit" must consult with the instructor.

A student who audits a course may later request credit standing by contacting the appropriate Continuing Education department head. An evaluating procedure, as stipulated by the instructor, will be determined.

Grading and Marks

Statement of Marks

It is the policy of Continuing Education to issue a statement of marks to every student who completes a course of 12 hours or more. To receive a statement of marks, all fees must be paid in full. Any request for change of information carried in the statement of marks must be made in writing to the office of Continuing Education WITHIN 30 DAYS of receipt of marks.

Grading

First Class – 80% or over
Second Class – 65% to 79%
Pass – 50% to 64%
Failure – less than 50%

F – Failure: Less than 50% or unapproved/unofficial withdrawal from subject or program.

A – Aegrotat: A standing granted to a student who has a good term record but is unable to write the final examination because of illness or other circumstances.

C – Credit Granted: Recognition of a successful challenge of a course.

P – Provisional Pass Fulfilled: Standing granted on the basis that the student has fulfilled the requirements of the provisional pass.

PP – Provisional Pass: Standing granted on the basis that the student will reach pass standing in the continuing subject.

AP – Adjudicated Pass: Subject standing inadequate; student permitted to continue based on overall performance.

N – Not complete: No standing granted because student did not complete subject requirements.

X – No examination or grade given for this subject.

S – Satisfactory: Subject requirements fulfilled, no mark assigned.

U – Unsatisfactory: Subject requirements not fulfilled, no mark assigned.

AU – Audit: Student attended subject, no credit given.

W – Withdrawal: Approved withdrawal from a subject or program.

Incomplete Standing

In extenuating circumstances, arrangements may be made to complete a course for credit where an "N" has been assigned. Those arrangements must be made in writing through the continuing education office WITHIN 30 DAYS OF THE END OF THE COURSE IN QUESTION.

Appeal of final mark

A student who is not satisfied with a final mark awarded is cautioned that the grade has been reviewed carefully and aside from clerical error, appeals seldom result in a higher mark. Request for re-consideration of a final mark should first be made on an informal basis to the instructor or head of the appropriate Continuing Education department. If unsatisfied, a formal appeal may be made in writing, to the Dean of CEIS, clearly stating the reasons for believing a higher grade is deserved. The appeal must be submitted within two months of the last class or in the case of a directed study course within two months of mailing the last assignment. The appeal must be accompanied by a fee of $10 which will be refunded if the orignal mark is favorably adjusted.

Transcripts

A fee of three dollars is charged for each transcript requested. To apply phone or write to: Student Records Coordinator, Continuing Education Department, BCIT, 3700 Willingdon Avenue, Burnaby, B.C., V5G 3H2; 434-5734, local 731.

Alternative Course Formats

Week-long

Various courses are offered in a week-long time frame. Each course will run Monday through Friday, 0900 to 1700 each day. One unit of credit is granted

upon successful completion. For a full listing of courses see the flyers that come out before each term.

Weekend Seminars

Some weekend seminars are offered throughout the year. Some span two weekends and are granted credit and some are just one weekend with no credit granted. For descriptions see individual courses or the flyers that come out before each term.

Downtown Courses

Regular BCIT courses are also offered in the downtown core of Vancouver. See the flyer published before the term for a full listing of available courses or phone 687-4666.

Part-Time Day Classes

Students may register in courses given in the day school diploma program, subject to the approval of the technology head. Where there is room approval will usually be granted.

A student making application for part-time day classes must get signatures of the technology head plus the instructor of each course, using the form "Request for Part-Time Study" available from the registration office. These courses are priced at the regular hourly rate and fees must be paid upon presentation of the completed form to the registration office.

Directed Study (Correspondence)

Courses offered are credit or non-credit preparatory or advanced, structured or non-structured, general interest or career-oriented. Within generous limits, you may enrol at any time, finish at any time, and progress at your preferred rate.

For more information, see index.

Campus Services and Facilities

Parking

Parking locations are indicated on the map on the back inside cover.

Handicapped persons should contact the Continuing Education office for special arrangements.

BCIT Security Department controls traffic and parking on campus. Vehicles improperly parked at any time may be removed at owner's expense. The speed limit is 25 kmh on campus roads. No overnight parking is permitted. If you are unable to move your vehicle due to mechanical failure you should leave a note of explanation on the windshield for the security staff, and make arrangements to have the vehicle removed within 24 hours.

Bookstore

Textbooks and supplies may be purchased at the bookstore which is located at ground level, on the east side of the Library Building.

The bookstore is open from 0800 to 1620. For evening classes the bookstore opens from 1730 to 2030 Monday through Thursday during September, October, January and the first two weeks of term three; and between 0830 and 1230 on the first two Saturdays of Term 1 and 2.

Most courses require that a textbook be purchased (generally $15–$25 but up to $50 for some engineering courses).

Used Bookstore

The Continuing Education Student Committee operates a used bookstore during weeks one and twelve of each term, Monday to Thursday, from 1800 to 2030 hours, in Building 2W, south of the Snackery.

Used books are brought on consignment, and sold to students at a fraction of their original price.

Library

Applications for a library card are available at the front desk of the library. The card will take one week to process. Library hours from September to May are:

Monday to Thursday	0800 – 2300
Friday	0800 – 1700
Saturday	0900 – 1600
Sunday	1200 – 1900

Note: A $25 fine will be charged for books overdue 30 days or more. An excellent self-guided library tour is available and students are encouraged to use the facilities and resources.

Student Activity Centre

The Student Activity Centre (SAC) building contains a full size gym, weight room, changing rooms, and equipment centre, cafeteria, health service office, beauty salon, student offices and committee rooms. More information on joining the Student Association can be obtained from the general office in the SAC or by phoning 434-5734, local 601.

Cafeteria

Hot meals are available at the Food Training Centre between 1630 and 1830 (Monday through Thursday) during the school terms. When classes are in session food service and light refreshments are available from the '76 (2N) Building Food Service; the Road Runner on the second floor of the main building (1A) and various other stations throughout the main building.

Canada Employment Centre on Campus

The centre contains a library of information on careers and employers for the use of students.

Students with inquiries should drop in to room 2N 204 or phone the employment office at 434-5734, local 333. Hours are Monday to Friday, 0800 to 1630 year round.

Industry Services

BCIT Industry Services is a unique national employee training resource for industry – including government agencies, private and public corporations, professional and volunteer organizations, and individuals.

It provides a variety of courses and programs throughout Canada in flexible formats, with emphasis on joint participation between the industry and BCIT in determining training needs and establishing a curriculum to meet those needs. Industry Services is not a profit enterprise but it does operate on a cost-recovery basis. A training consultant is available to discuss training needs and costs.

BCIT is extremely flexible in the development of individual and group training programs and locating them. Services are provided on the BCIT campus, on business or industry premises, or wherever convenient.

For an in-depth meeting to determine your training needs and how BCIT can help, contact Industry Services at (604) 434-5734, local 636.

Distance Education Department

This department consists of the Program Development Group, the Directed Study Centre and the Interactive Instructional Television Group. The members of this group produce, acquire, evaluate, and administer instructional materials to support a growing number of educational outreach programs for BCIT. The department's main role is to make the resources of BCIT accessible to the adult population of the province.

Directed Study Centre

The Directed Study Centre offers both credit and non-credit correspondence courses which are preparatory or advanced, structured or non-structured, general interest or career-oriented. Registrations are accepted at any time. Assignments can be completed at a rate adapted to schedules of working adults.

Courses available include the following:

Business

Accounting for Office Managers 1; Accounting for Office Managers 2; Decision-Making; Principles of Administration; Principles of Economics; Purchasing for the Hospitality Industry; Food and Beverage Cost Control; Hospitality Accounting 1; Front Office Procedures; Taxation 1

Engineering

Air-Photo Interpretation; Remedial Mathematics; Algebra 2; Algebra 3; Calculus 1; Calculus 2; Logarithms, Complex Numbers, and Analytic Geometry; Physics 1; Physics 2; Trigonometry

Health

Advanced Haematology for Registered Technologists

Forestry

Botany; Dendrology; Ecology; Silviculture; Fire Management; Forest Measurements; Forest Soils; Surveying; Wood Technology; Hydrology; Mathematics; Meteorology; Range Management

Highways/Civil

Bridge Maintenance 1; Communications 1; Drainage 1; Geology and Soils 1; Survey 1; Technical Mathematics 2

Program Development Group

The Program Development Group develops many of the courses and programs in distance education which are administered by the Directed Study Centre. They redesign existing day school courses which carry the same BCIT credit rating as those delivered in the classroom. They also design and develop courses for industry, government and business. The courses may be delivered in a variety of ways, including classroom delivery at BCIT or a place of the client's choosing.

For detailed information call (604) 434-5734, local 406/408, or write to: Distance Education, B.C. Institute of Technology, 3700 Willingdon Avenue, Burnaby, B.C., V5G 3H2

Course Equivalencies

Correspondence courses that are equivalent to continuing education classroom courses are listed below. These courses carry credits toward BCIT part-time study certificates.

Continuing Education (Part-Time Courses)	**Directed Study Centre (Correspondence Courses)**
Management in Industry 1 and 2	Principles of Administration
Economics 1 and 2	Principles of Economics
Problem Solving & Decision Making	Decision Making
Accounting for the Manager	Accounting for the Office Manager 1&2
Taxation 1	Taxation 1
Front Office Procedures	Hotel/Motel Front Office Procedures
Food and Beverage Cost Control	Food and Beverage Cost Control
Photo Interpretation & Remote Sensing	Air-Photo Interpretation
Math Pre-Entry (non-credit)	Remedial Math
Algebra 2	Algebra 2
Logarithms & Analytic Geometry	Logarithms, Complex Numbers, & Analytic Geometry
Calculus 1	Calculus 1
Calculus 2	Calculus 2

More detailed information is in the BCIT correspondence course calendar, available from: (604) 434-5734, local 648/754, or write to: Directed Study Centre, B.C. Institute of Technology, 3700 Willingdon Avenue, Burnaby, B.C., V5G 3H2

Interactive Instructional Television Group

The Interactive Instructional Television Group operates the institute's televised instruction facilities which are used to produce both recorded instruction and live classes for distribution via cable systems and satellite to individual homes and special receiving classrooms around the province.

This group was established both to provide televised instruction throughout the province in cooperation with other institutions and agencies and to experiment with a variety of instructional techniques appropriate to the courses and requirements of the communities of B.C.

Training and Development Centre

The Training and Development Centre presents seminars, conferences and workshops in business and management, computer systems, engineering, technology and instructor training. They are designed for the general business and professional community, industry, education, and government organizations. The speakers selected are leaders in their field who present their subjects in a practical and pragmatic fashion.

The following one- to 10-day seminars are offered on a regular basis through the Training and Development Centre. For a detailed brochure, or further information, contact the Training and Development Centre at 434-5734, local 746 or 445. If you would like your name added to our general mailing list, please notify us.

Business, Management and Computer Systems Technology

Project Management
Successful Labor Negotiations
Communication in Supervision
Report Writing for Professionals
Training Manager's Course – Level 1
Training Manager's Course – Level 2
Management for Results
Dynamics of Effective Management
How to Make Meetings Work
Successful Business Negotiating
Psychology of Professional Selling
Advanced Salesmanship Workshop
Word Processing and Office Automation
Evaluating and Selecting Business Mini/Micro Computers
Data Communications
Systems Analysis and Design
Packet Switching Technology

Instructor Training and Higher Education Seminars

Designing Effective Instruction
Course Design
Instructional Techniques 1
Instructional Techniques 2
The Executives' Role in Implementing Institutional Renewal

Technical Seminars and Conferences

BCIT Pulp and Paper Summer Institute
Basics for Installation, Operation and Maintainability of Hydraulic Systems
Computer Graphics in Landscape Assessment
Energy Transfer
Industrial Electronics 1 and 2
Industrial Electronics 3*
Industrial Electronics 4*
Mechanical Power Transmission*

* These seminars being developed.

WEEK-LONG COURSES

Week of	Course	Location
July 21	Data Processing – Introduction	BCIT
July 28	Data Processing – Introduction	BCIT
August 11	Data Processing – Introduction	BCIT
August 18	Data Processing – Introduction	BCIT
August 25	Data Processing – Introduction	BCIT
October 6	Management in Industry 1	Downtown
	Salesmanship 1	Downtown
	Supervisory Skills	Downtown
	Training Techniques	Downtown
October 20	Admin Assistant/Exec. Secretary 1	Downtown
	Labor Relations 1	Downtown
	Organizational Behavior 1	Downtown
October 27	Interior Design – Basic	Downtown
	Management in Industry 1	Downtown
	Organizational Behavior 2	Downtown
November 3	Management in Industry 2	Downtown
	Supervisory Skills	Downtown
November 17	Organizational Behavior 1	Downtown
	Personnel Management	Downtown
November 24	Management in Industry 1	Downtown
	Organizational Behavior 2	Downtown
	Training Techniques	Downtown
December 1	Management in Industry 2	Downtown
	Supervisory Skills	Downtown
December 8	Labor Relations 2	Downtown
February 2	Supervisory Skills	Downtown
February 9	Admin Assistant/Exec Secretary 2	Downtown
	Training Techniques	Downtown
February 16	Management in Industry 1	Downtown
February 23	Interior Design – Basic	Downtown
	Organizational Behavior 1	Downtown
March 2	Labor Relations 1	Downtown
March 9	Accounting 1	Downtown
	Accounting for the Manager	BCIT
	Admin Assistant/Exec Secretary 1	BCIT
	Data Processing – Introduction	BCIT
	General Marketing	BCIT
	Labor Relations 1	BCIT
	Labor Relations 2	BCIT
	Management in Industry 1	BCIT
	Management in Industry 2	BCIT
	Oral Communications & Public Speaking 1	BCIT
	Organizational Behavior 1	BCIT
	Organizational Behavior 2	BCIT
	Personnel Management	Downtown
	Public Relations	Downtown
	Supervisory Skills	BCIT
	Training Techniques	BCIT
March 16	Management in Industry 2	Downtown
	Organizational Behavior 2	Downtown
March 30	Organizational Behavior 1	Downtown
April 27	Admin Assistant/Exec Secretary 1	Downtown
	Labor Relations 2	Downtown
	Management in Industry 1	Downtown
	Supervisory Skills	Downtown

May 4	Management in Industry 2	Downtown
	Organizational Behavior 2	Downtown
	Training Techniques	Downtown
May 11	Labor Relations 1	Downtown
	Organizational Behavior 1	Downtown
May 25	Personnel Management	Downtown
June 1	Accounting for the Manager	Downtown
	Admin Assistant/Exec Secretary 1	BCIT
	Data Processing – Introduction	BCIT
	Labor Relations 1	BCIT
	Management by Objectives	Downtown
	Management in Industry 1	BCIT
	Public Relations	Downtown
	Property Investment for Accommodation – Restaurant and Pubs	Downtown
	Salesmanship 1	Downtown
	Selection Interviewing	BCIT
	Supervisory Skills	Downtown
June 8	Accounting 1	Downtown
	Data Processing – Introduction	BCIT
	Inventory Planning and Control	BCIT
	Labor Relations 2	BCIT
	Management in Industry 2	BCIT
	Manpower Planning	Downtown
	Organizational Behavior 1	BCIT
	Organizational Behavior 2	Downtown
June 15	Business Law 1	BCIT
	Data Processing – Introduction	BCIT
	Management in Industry 1	Downtown
	Organizational Behavior 2	BCIT
	Personnel Management	BCIT
	Purchasing	BCIT
	Salesmanship 2	BCIT
	Training Techniques	Downtown
June 22	Business Law 2	BCIT
	Data Processing – Introduction	BCIT
	General Marketing	Downtown
	Management in Industry 2	Downtown
	Supervisory Skills	BCIT

DOWNTOWN

BUSINESS

Term 1

Courses begin the week of September 8. All courses will be held in the downtown core. The specific locations will be determined one month in advance in the "Nite Life" flyer.

MONDAY

The following courses are offered in the 1700-1915 time frame for fourteen weeks.

Accounting for the Manager
Business Law 1
Computers in Business
Cost Accounting 1
Economics 1
General Marketing
Interior Design – Basic
Labor Relations 1
Management in Industry 1
Management of Time (7 weeks)
Manpower Planning
Marketing 1
Marketing Planning
Sales Management
Selection Interviewing
Training Techniques

TUESDAY

The following courses are offered in the 1700-1915 time frame for fourteen weeks.

Accounting 1
Accounting for the Manager
Computer Systems – Introduction 1
Data Communications 1 (1730-2030)
Discussion Leadership
Facility Layout & Materials Handling
Financial Accounting 1
Financial Independence
International Documentation Importing
Managerial Styles
Managing Word Processing
Marketing 1
Organizational Behavior 1
Real Estate Investment Analysis
Salesmanship 1
Security Analysis
Supervisory Skills

The following course is offered in the 1930-2145 time frame for fourteen weeks.

Supervisory Skills

WEDNESDAY

The following courses are offered in the 1700-1915 time frame for fourteen weeks.

Accounting 1
Basic Math of Finance
Business Finance 1
Counselling 1
Customer Relations & Communication Skills
Inventory Planning and Control
Management by Objectives
Management in Industry 1
Management in Industry 2
Office Management
Organizational Behavior 2
Personnel Management
Public Relations
Purchasing
Retailing
Taxation 1
Testing

The following course is offered in the 1730-2030 time frame for fourteen weeks.

Data Base Concepts

The following course is offered in the 1800-2100 time frame for twelve weeks.

International Air 1

The following courses are offered in the 1930-2145 time frame for fourteen weeks.

Management in Industry 1

This course is offered Wednesday from 1330-1630 for 14 weeks.

Understanding Wines and Spirits

THURSDAY

The following courses are offered in the 1700-1915 time frame for fourteen weeks.

Admin. Assistant/Exec. Secretary 1
Advertising 1
Computer Operations Management
Credit and Collections
Domestic Air
Introduction to Tourism
Method Study – Office
Oral Communication & Public Speaking 1
Organizational Behavior 1
Salary Administration
Salesmanship 2
Supervisory Skills
Tours and Hotels

This course is offered in the 1730-2045 time frame for seventeen weeks.

Principles of Accounting (Accelerated)

The following course is offered in the 1930-2145 time frame for fourteen weeks.

Organizational Behavior 1

Term 2

Courses get underway during the week of January 12, 1981. All courses will be held in the downtown core. The specific locations will be determined one month in advance in the "Nite Life" Flyer.

MONDAY

The following courses are offered in the 1700-1915 time frame for fourteen weeks.

Accounting for the Manager
Advertising 1
Business Law 2
Computers in Business
Food and Beverage Cost Control
General Marketing
Interior Design – Basic
Labor Relations 2
Management in Industry 1
Management in Industry 2
Management of Time (7 weeks)
Marketing 1
Project Planning Scheduling
Rail, Bus and Ship
Sales Management
Selection Interviewing
Tours and Hotels
Training Techniques
Transportation Economics

The following courses are offered in the 1700-1915 time frame for twenty-one weeks.

Cost Accounting 2
Economics 2
Marketing 2

The following courses are offered in the 1930-2145 time frame for fourteen weeks.

Economics 1

TUESDAY

The following courses are offered in the 1700-1915 time frame for fourteen weeks.

Accounting for the Manager
Admin Assistant/Exec Secretary 1
Advertising Creative Print
Business Law 1
Computer Systems Introduction 2
Data Communications 2 (1730-2030)
Discussion Leadership
Financial Independence
International Air 1
Introduction to Transportation
Organizational Behavior 2
Managing Word Processing
Managerial Styles
Problem Solving and Decision Making
Salesmanship 1
Supervisory Skills
Taxation

The following courses are offered in the 1700-1915 time frame for twenty-one weeks.

Accounting 2
Financial Accounting 2
Marketing 2

The following courses are offered in the 1930-2145 time frame for fourteen weeks.

Marketing Research
Supervisory Skills

WEDNESDAY

The following courses are offered in the 1700-1915 time frame for fourteen weeks.

Basic Math of Finance
Counselling 1
Data Communications 2
Introduction to Tourism
Inventory Planning and Control
Labor Relations Research
Management in Industry 2
Operations Planning
Organizational Behavior 1
Personnel Management
Public Relations
Purchasing
Retailing
Taxation 2

The following courses are offered in the 1700-1915 time frame for twenty-one weeks.

Accounting 2
Business Finance 2

The following course is offered in the 1730-2030 time frame for fourteen weeks.

Data Base Concepts

The following course is offered in the 1730-2045 time frame for seventeen weeks.

Principles of Accounting (Accelerated)

The following courses are offered in the 1930-2145 time frame for fourteen weeks.

Management in Industry 1
Management in Industry 2

THURSDAY

The following courses are offered in the 1700-1915 time frame for fourteen weeks.

Admin Assistant/Exec Secretary 1
Advertising
Credit and Collections
Domestic Air
Labor Relations 1
Marketing and Customer Behavior
Oral Communication & Public Speaking 2
Organizational Behavior 1
Organizational Behavior 2
Principles of Property Management
Salary Administration
Salesmanship 2
Supervisory Skills
Systems and Procedures Manual

The following course is offered in the 1700-1915 time frame for twenty-one weeks.

Accounting 1L

The following courses are offered in the 1930-2145 time frame for fourteen weeks.

Management in Industry 2
Organizational Behavior 1
Organizational Behavior 2
Salesmanship 1

BUSINESS

Two Nights per Week

Term 1

(begins week of September 8)

Stats. for Business & Industry
Tuesday & Thursday
10½ weeks 1700-1915

Term 2

(begins week of January 12)

Preparatory Business Mathematics
Tuesday & Thursday
10 weeks 1700-1915

Stats. for Business & Industry
Tuesday & Thursday
10½ weeks 1700-1915

Term 3

(Tuesday/Thursday courses begin April 21, Wednesday/Monday courses begin April 22)

All courses are two nights/week for 7 weeks in the 1700-1915 time frame except where noted

Wednesday/Monday Classes

Accounting for the Manager
Advertising 2
Discussion Leadership
Economics 2 (10½ weeks)
Management in Industry 2
Marketing 2 (10½ weeks)
Organizational Behavior 2
Personnel Management
Selection Interviewing
Supervisory Skills

Tuesday/Thursday Classes

Admin Assistant/Exec Secretary 2
Business Law 2
General Marketing
Labor Relations 1
Management in Industry 1
Organizational Behavior 1
Tourism Geography
Training Techniques

Monday/Thursday Classes

Domestic Air
Labor Relations 1

Note: Exception — THURSDAY ONLY
(one night a week for 4 weeks in the 1700-1915 time frame beginning April 24)
Project Study Office

All courses will be held in the downtown core. The specific locations will be determined one month in advance in the "Nite Life" flyer.

DOWNTOWN

BUSINESS

ONE DAY PER WEEK
1 DAY/WEEK FOR 6 CONSECUTIVE WEEKS

0900-1600

Term 1	**Day**	**Beginning**
Advertising 1	Wednesdays	October 15
Labor Relations 1	Fridays	October 17
Management in Industry 1	Fridays	October 17
Organizational Behavior 1	Mondays	October 20
Salesmanship 1	Mondays	October 20
Supervisory Skills	Fridays	October 17
Term 2		
Advertising 2	Wednesdays	February 11
Labor Relations 2	Fridays	February 6
Management in Industry 2	Fridays	February 6
Organizational Behavior2	Mondays	February 9
Public Relations	Fridays	February 6
Supervisory Skills	Mondays	February 9

Note: The decision as to whether these courses will have sufficient enrolment to run will be made one week before course is due to begin.

DOWNTOWN

ENGINEERING AND CORE

Term 1 – (begins week of September 8)

MONDAY
Probability and Statistics P.Eng. Tutorial
18 weeks 1730-2030
Economics of Building
12 weeks 1830-2130

TUESDAY
Business and Technical Correspondence
14 weeks 1730-1945
Algebra 1
12 weeks 1730-2030

THURSDAY
National Building Code
14 weeks 1730-1945
Algebra 2
12 weeks 1730-2030
Mass Spectrometry
12 weeks 1900-2130

Term 2 – (begins week of January 12)

MONDAY
Probability and Statistics P.Eng. (continues)
1730-2030

TUESDAY
Algebra 1
12 weeks 1730-2030

WEDNESDAY
Business and Technical Report Writing
Introduction to Construction Industry Procedures
14 weeks 1730-1945

Two Nights per Week
TUESDAY AND THURSDAY
Calculus 1
12 weeks 1730-2030

Term 3 – (begins week of April 21, 1981)

MONDAY
Business and Technical Correspondence
14 weeks 1700-1915

BUSINESS

Fees: Course fees for all regular course offerings are on page 4 .

Weeklong Courses: are identified by  . For complete listings, see pages 14 and 15

Downtown Courses: are identified by  . For dates and times, see pages 16 to 18

BUSINESS COURSES AND CERTIFICATE PROGRAMS

ADMINISTRATIVE MANAGEMENT TECHNOLOGY

ADMINISTRATIVE MANAGEMENT TECHNOLOGY

Business Certificate in Administrative Management

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
10.131 Management in Industry 1	1.0	10.232 Management in Industry 2	1.0	16.904 Accounting for the Manager	1.0
10.221 Organizational Behavior 1	1.0	10.321 Organizational Behavior 2	1.0		
Year 2					
10.910 Personnel Management	1.0	10.907 Discussion Leadership	1.0	10.908 Problem Solving & Decision Making	1.0
10.325 Labor Relations 1	1.0	10.425 Labor Relations 2	1.0		
Year 3					
10.135 Economics 1	1.0	10.235 Economics 2	1.5	Elective	0.5
10.360 Business Law 1	1.0	10.460 Business Law 2	1.0		

Note: 10.904 Supervisory Skills, should be taken before Management in Industry 1 and 2 if the student is close to entering supervision or is a relatively new supervisor.

Business Certificate in Personnel Management

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
10.131 Management in Industry 1	1.0	10.232 Management in Industry 2	1.0	10.907 Discussion Leadership	1.0
10.221 Organizational Behavior 1	1.0	10.321 Organizational Behavior 2	1.0		
Year 2					
10.910 Personnel Management	1.0	10.913 Selection Interviewing	1.0	Elective	1.0
10.950 Training Techniques	1.0	10.918 Occupational Safety and Health	1.0		
Year 3					
10.914 Manpower Planning	1.0	10.901 Salary Administration	1.0	Elective	1.0
10.325 Labor Relations 1	1.0	10.425 Labor Relations 2	1.0		

Business Certificate in Public Administration

(for Municipal Option – see below)

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
10.131 Management in Industry 1	1.0	10.232 Management in Industry 2	1.0	31.910 Business & Technical Correspondence or 31.912 Business Report Writing	1.0
10.240 Government & Business	1.0	16.350 Public Financial Administration	1.0		
Year 2					
10.221 Organizational Behavior 1	1.0	10.321 Organizational Behavior 2	1.0	16.904 Accounting for the Manager	1.0
*10.340 Government and Politics in Canada 1	1.0	*10.440 Government and Politics in Canada 2	1.0		
Year 3					
10.325 Labor Relations 1	1.0	10.425 Labor Relations 2	1.0	Elective	1.0
10.941 Concepts of Economics	1.0	10.910 Personnel Management	1.0		

For information on certification by the Municipal Administration Education Council of B.C. see page 162.

*Government and Politics in Canada 1 and 2 are only available through the day school. Students will require the approval of the department head concerned to arrange to take these courses. Students who want a BCIT Business Certificate in Public Administration (Municipal Administration Option) should substitute the two courses 10.957 Municipal Law, and 10.956 Local Government for Government and Politics in Canada 1 and 2.

Canadian Institute of Management Certificate Program in Management and Administration

Program description and admission requirements are on page 34, 159.

Canadian Institute of Management course credits may be used for BCIT certificate programs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
10.970 Organization as Systems CIM	1.0	10.971 Managerial Accounting – CIM	1.0		
Year 2					
10.978 Canadian Business Law	1.0	10.973 Organizational and Human Behavior – CIM	1.0		
Year 3					
10.974 Marketing CIM	1.0	10.975 Operations Management – CIM	1.0		
Year 4					
10.976 Applied Management – Finance CIM	1.0	10.977 Applied Management – Policy and Administration – CIM	1.0		

Electives and Substitutions

It is our sincere desire to assist students to plan and complete a certificate program that is most useful to the particular individual. Therefore, considerable flexibility is permitted in the selection of electives and in substitutions, providing that the changes are appropriately related to the particular certificate program.

Such selections should be approved in advance in writing by a Program Consultant to ensure that they are appropriate and will be accepted as an elective or substitute.

Electives and substitutions may be selected from any course listed in the Administrative Management Technology when approved by a Program Consultant, or such courses as:

		Units
14.050	Data Processing – Introduction	1.0
14.052	Computers in Business	1.0
16.361/461	Business Finance 1 and 2	2.5
16.904	Accounting for the Manager	1.0
20.180/280	Marketing 1 and 2	2.5
20.502/602	Oral Communications and Public Speaking 1 and 2	2.0
22.100	Basic Mathematics of Finance	1.0
22.901	Purchasing	1.0
22.902	Inventory Planning and Control	1.0
22.903	Operations Planning	1.5
22.906	Advanced Purchasing	1.0
22.935	Statistics for Business and Industry	1.5
22.941	Method Study – Manufacturing	1.0
22.943	Performance Measurement	1.0
22.944	Project Study – Manufacturing	0.5
22.948	Method Study – Office	1.0
22.952	Systems and Procedures – Manual	1.0
22.954	Project Study – Office	0.5
22.963	Mathematics for Management	1.5
31.910	Business and Technical Correspondence	1.0
31.912	Business Report Writing	1.0

or other courses listed in the Business Management Division, selected by the student, and approved in writing by a Program Consultant.

Day School Equivalency

Students interested in applying Continuing Education course credits toward day school courses should contact our Program Consultants for further details.

10.131 MANAGEMENT IN INDUSTRY 1

This course is designed for supervisors, managers and persons anticipating such responsibility. It provides a practical and theoretical introduction to the principal functions of modern management. The material covered is particularly useful for persons with no formal training in management.

Outline: Through lectures, films, and case discussions, with special emphasis on participation, the student will obtain a good understanding of how an organization functions to accomplish its goals. It will also provide an insight for planning a certificate program which will be of maximum assistance to the student in reaching his career goals.

Topics include the related areas of communication and management information systems; setting objectives; planning for profit, sales and personnel; organization theory and structure.

Note: Students who are newly appointed supervisors or anticipate a supervisory appointment in the near future should take Supervisory Skills (10.904) before Management in Industry 1.

Term 1 Sept. 8 Mon. 1845-2145
Sept. 9 Tue.
Sept. 10 Wed.
Sept. 11 Thur.
Sept. 13 Sat. 0900-1200
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 12 Mon. 1845-2145
Jan. 13 Tue.
Jan. 14 Wed.
Jan. 15 Thur.
Jan. 17 Sat. 0900-1200

begins again:

Term 3 Apr. 6 Mon. 1845-2145
Apr. 7 Tue.
Apr. 8 Wed.

At BCIT two nights a week

Oct. 20 Mon. & Wed. 1845-2145
6 weeks (2 nights/week) 1.0 Unit

begins again:

Feb. 16 Mon. & Wed. 1845-2145

begins again:

Apr. 6 Mon. & Wed. 1845-2145

10.135 ECONOMICS 1 – MICRO

Prerequisite: Grade 11 Math or 22.900 Preparatory Business Math

This course is designed to improve managerial skills by providing a basic understanding of how the market-place functions. It supplies background for other BCIT courses and is accepted by various associations such as the Institute of Chartered Accountants for students in such programs.

On completion the student has increased his understanding of the anatomy and physiology of the economy and the interaction of individual components to the interdependent economy.

Term 1 Sept. 9 Tue. 1845-2145
Sept. 10. Wed.
Sept. 11 Thur.
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 12 Mon. 1845-2145

10.221 ORGANIZATIONAL BEHAVIOR 1 (formerly Management Psychology 1)

This course will give the person with no formal course in Organizational Behavior a background in basic behavioral concepts and the application to management situations. This will include exposure to the operational definitions or terminology common to psychology and other social sciences to allow the student to grasp more readily the information conveyed in reading in all areas of organizational behavior studies.

Outline: The course is a combination of lectures, films, case studies, discussion, and group experiences. Concentration is on the individual in the first portion of the course with a focus on determinants of behavior, heredity, culture, motivation, perception, attitudes, learning and leadership. The course concludes with a focus on understanding group interactions in an organizational environment.

Succeeding course is Organizational Behavior 2.

Term 1 Sept. 8 Mon. 1845-2145
Sept. 9 Tue.
Sept. 10 Wed.
Sept. 11 Thur.
Sept. 13 Sat. 0900-1200
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 12. Mon. 1845-2145
Jan. 13 Tue.
Jan. 14 Wed.
Jan. 15 Thur.
Jan. 17 Sat. 0900-1200

begins again:

Term 3 Apr. 7 Tue. 1845-2145

BCIT two nights a week

Oct. 21 Tue. & Thur. 1845-2145
6 weeks (2 nights/week) 1.0 Unit
begins again:
Apr. 7 Tue. & Thur. 1845-2145

10.232 MANAGEMENT IN INDUSTRY 2

The course continues the study of the functions of management begun in Management in Industry 1.

Outline: Through lectures, films and case discussions students will examine the management functions of directing and controlling. Topics include: leadership styles, decision-making, labor relations and other aspects of management responsibility.

Term 1 Sept. 8 Mon. 1845-2145
Sept. 9 Tue.
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 12 Mon. 1845-2145
Jan. 13 Tue.
Jan. 14 Wed.
Jan. 15 Thur.
Jan. 17 Sat. 0900-1200

begins again:

Term 3 Apr. 7 Tue. 1845-2145

BCIT two nights a week

Apr. 6 Mon. & Wed. 1845-2145
6 weeks (2 nights/week) 1.0 Unit

begins again:

May 20. Wed. & Mon.

10.235 ECONOMICS 2 – MACRO

Prerequisite: Economics 1 - Micro

(A continuation of the study of principles of economics begun in Economics 1.)

The student should have a good understanding of how and why the economy works as it does.

Outline: wages, employment, unemployment, competition, profits, consumer behavior, change theory, supply and demand, price discrimination, speculation, price-setting behaviors, interest, production theory, etc.

Term 2 Jan. 13 Tue. 1845-2145
Jan. 14 Wed.
Jan. 15 Thur.
18 weeks 1.5 Units

BCIT two nights a week

Apr. 7 Tue. & Thur. 1845-2145
9 weeks (2 nights a week) 1.5 Units

10.240 GOVERNMENT AND BUSINESS

This basic course will be particularly helpful to persons seeking a career in the federal, provincial or municipal levels of government for business people who need to understand the kind, extent and reasons for government involvement in business.

Outline: Through lectures, group discussions and selected readings the class will explore: federal, provincial and municipal government in the regulation and support of business enterprises in Canada; government/policy toward monopoly and combines control, legislation and regulations in such areas as banking, broadcasting, transportation, labor, consumer protection, etc.: support programs of various types of economic development; taxation, licensing, marketing boards, etc.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

10.321 ORGANIZATIONAL BEHAVIOR 2 (formerly Management Psychology 2)

Prerequisite: 10.221 Organizational Behavior 1

This second part of Organizational Behavior is for persons in counselling situations or with leadership responsibilities who, having com-

pleted Part 1, will benefit from a deeper appreciation of motivation theory and applications.

It will build on the base provided in Part 1 so that students on completion may better understand and cope with human behavior situations in the world of work.

Outline: Through lectures, case studies, and films the group will probe deeper into the theories which were introduced in part 1 as they relate to people management. This includes organization culture, attitudes and their importance in change leadership styles and conflict in goals and objectives.

Term 1 Sept. 9 Tue. 1845-2145
Sept. 11 Thur.
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 12 Mon. 1845-2145
Jan. 13 Tue.
Jan. 14 Wed.
Jan. 15 Thur.
Jan. 17 Sat. 0900-1200

begins again:

Term 3 Apr. 7. Tue. 1845-2145
Apr. 8 Wed.

BCIT two nights a week

May 19 (Tue. & Thur.) 1845-2145
6 weeks (2 nights/week) 1.0 Unit

10.325 LABOR RELATIONS 1

This course is designed for people who are involved in or associated with labor relations either as a member of management or a union. People in the personnel field, shop stewards, supervisors, or managers will find the coverage of the collective bargaining process and day-to-day contract administration extremely useful.

The student can expect to approach his responsibilities in matters covered by a collective agreement with more confidence and expertise.

Outline: Through lectures, case discussions and exchange with the group the course covers related laws, typical contract clauses, grievance procedure, responsibilities of the supervisor and the shop steward and current activities in the labor relations field.

Term 1 Sept. 8 Mon. 1845-2145
Sept. 10 Wed.
Sept. 11 Thur.
Sept. 13 Sat. 0900-1200
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 13 Tue. 1845-2145
Jan. 15 Thur.

begins again:

Term 3 Apr. 6 Mon. 1845-2145

BCIT two nights a week

Apr. 6 Mon. & Wed. 1845-2145
6 weeks (2 nights/week) 1.0 Unit

10.360 BUSINESS LAW 1

This course is designed as familiarization for students who will benefit from a general coverage of commercial law or those requiring the fundamentals to proceed to the more advanced studies outlined in 10.460 Business Law2.

Outline: the course consists of reading assignments, lectures based on the readings, and case study.

About half of the course will deal with contract law. Other topics covered with be jurisprudence, organization of courts, a brief discussion of tort law, along with a brief study of constitutional law.

Term 1 Sept. 10 Wed. 1845-2145
Sept. 11 Thur.
Sept. 13 Sat. 0900-1200
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 14 Wed. 1845-2145

10.425 LABOR RELATIONS 2

(A continuation of the studies begun in Labor Relations 1)

This course gives students a thorough understanding of the practical applications of administering the collective agreement, wage issues, economics supplements, arbitration, mediation, preparation for collective bargaining and techniques in collective bargaining.

Case studies, discussion groups and role playing techniques are used in these presentations.

Term 2 Jan. 12 Mon. 1845-2145
Jan. 14 Wed.
Jan. 15 Thur.
Jan. 17 Sat. 0900-1200
12 weeks 1.0 Unit

begins again:

Term 3 Apr.6 Mon. 1845-2145

BCIT two nights a week

Apr. 7. Tue. & Thur. 1845-2145
6 weeks (2 nights/week) 1.0 Unit

begins again:

May 20 Wed. & Mon.

10.460 BUSINESS LAW 2

This second part of the 24-week course will give students carrying on from 10.360 a considerably greater depth of knowledge of commercial law.

Upon completion of this course students will be able to deal more effectively with lawyers and be better able to handle many of their own affairs. Finally, completion of this course will enable students to determine specifically what legal problems should be turned over to a lawyer.

Outline: This course consists of reading assignments, lectures based on readings and case study. Topics of study include Canadian mercantile law; the law of contracts and subjects involved with guarantee, agency, employment, mechanics' and wage earners' liens, sale of goods, bailment, corporations, partnerships, bankruptcy, real property, mortgages, landlord and tenant, negotiable instrument, insurance, banks and banking torts, crimes, marriage, and constitutional law.

Term 2 Jan. 14 Wed. 1845-2145
Jan. 15 Thur.
Jan. 17 Sat. 0900-1200
12 weeks 1.0 Unit

begins again:

Term 3 Apr. 8 Wed. 1845-2145

10.530 ADMINISTRATIVE ASSISTANT/EXECUTIVE SECRETARY 1

This course is intended for secretaries and other office workers who wish to prepare themselves for increased responsibilities in a staff position such as administrative assistant or executive secretary. People now working in such a position can also benefit by increasing their knowledge and skills to broaden the scope of their work.

A secretary/assistant is often an under-utilized member of the management team. Students completing this course can expect to increase their confidence in many areas and therefore be able to take more initiative and a wider range of administrative responsibilities.

Outline: the role of the secretary today, time management principles, expressing ideas (both speaking and writing), listening skills, handling criticism, and small group discussion skills. Student participation to develop communication skills and to share information and encouragement is stressed in this course.

Term 1 Sept. 8 Mon. 1845-2145
Sept. 10. Wed.
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 14 Wed. 1845-2145

begins again:

Term 3 Apr. 8 Wed. 1845-2145

10.630 ADMINISTRATIVE ASSISTANT/EXECUTIVE SECRETARY 2

Students having previously taken Administrative Assistant/Executive Secretary 1 will find this course provides a good opportunity to further practise communication skills in order to familiarize themselves with aspects of their work. Other prospective students with a good knowledge of communication skills can be accepted into the course with the consent of the instructor. See 10.530.

Outline: writing memos and short reports, public relations skills, interviewing, instructing and evaluating other employees, the role of the secretary in meetings, decision making and problem solving. Written and oral communication skills will be developed through individual and group assignments that will relate to trends in office procedures. Skills necessary to work as part of a team will be especially stressed.

Term 2 Jan. 12 Mon. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 3 Apr. 6 Mon. 1845-2145

10.901 SALARY ADMINISTRATION

Prerequisite: Personnel Management or equivalent experience

On completion of the course the student should know the whys and hows of salary administration and have an introductory level knowledge and understanding of the techniques in this field.

Outline: Through lectures, discussions, case presentations and examples, this course will cover how to set up a plan, alternative methods of job evaluation, elements of a job description, administering a salary plan, establishing and maintaining salary schedules, the various types of general and specific adjustments for promotions, demotions, etc.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

begins again:
Term 2 Jan. 12 Mon. 1845-2145

10.902 SMALL BUSINESS MANAGEMENT 1

This course will assist people planning to embark on a small business venture, either starting a new business or purchasing an existing operation.

Through developing a new business proposal in class, members of the group should be able to analyze systematically the feasibility of participating in a small business operation.

Outline: The subjects covered by lectures, case studies and general discussions will include prerequisites for success, financing, legal problems, credit, physical facilities, location and layout planning, etc.

Operational tactics are covered in Part 2.

Term 1 Sept. 9 Tue. 1845-2145
Sept. 10 Wed.
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 13 Tue. 1845-2145
Jan. 14 Wed.

BCIT two nights a week

Apr. 6 Mon. & Wed. 1845-2145
6 weeks (2 nights/week) 1.0 Unit

10.903 SMALL BUSINESS MANAGEMENT 2

This course is designed for the manager or owner of a small business and for students who have completed Part 1 and wish to be exposed to operating techniques before embarking on a new business venture.

This segment of the two-part course will assist in planning, organizing, directing and controlling each of the key functional areas of a small business. It is designed to improve the effectiveness of the student in tackling his day-to-day business problems

Outline: Subjects covered through lecture, case studies, films, and general discussion will include financial control, recordkeeping, budgeting, forecasting, product and inventory control, pricing, sales promotion, staffing, and other functions pertinent to successful business operation.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 14 Wed. 1845-2145

10.904 SUPERVISORY SKILLS

New supervisors or aspirants for leadership responsibilities will find this course designed to meet their needs. It is applicable to people in large or small companies, institutions, government departments, municipalities, or associations – wherever a supervisory situation exists.

It will provide knowledge and techniques for the student to increase his confidence and capabilities as a leader. It also will prepare the student for more in-depth training in supervision and management.

Outline: Lectures, films and case discussions are used to cover the needs of persons taking the first step into supervision. Included are such subjects as getting work done through others, handling grievances, delegation, work planning, and roles and relationships within an organization.

Term 1 Sept. 9 Tue. 1845-2145
Sept. 10 Wed.
Sept. 11 Thur.
Sept. 13 Sat. 0900-1200
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 13 Tue. 1845-2145
Jan. 14 Wed.
Jan. 15 Thur.
Jan. 17 Sat. 0900-1200

begins again:

Term 3 Apr. 8 Wed. 1845-2145
Apr. 9 Thur.

BCIT two nights a week

Oct. 20 Mon. & Wed. 1845-2145
6 weeks (2 nights a week) 1.0 Unit

begins again:

Apr. 6 Mon. & Wed. 1845-2145

10.905 MANAGERIAL STYLES

Prerequisite: Students should have a working experience in leadership situations and preferably have completed Management in Industry and Organizational Behavior.

This is a practical course designed for people with leadership responsibility as supervisors or managers, or for students who have taken other courses and wish a better understanding of the "people aspects" in management.

The course will assist students in developing a productive management style.

Outline: Starting with the roles and relationships of a manager, the course through lectures, case studies, films and discussion groups provides a practical application of management psychology, a good examination of how accepted theories may be applied in differing situations and the implications for organizational behavior and development.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 14 Wed. 1845-2145

begins again:

Term 3 Apr. 8 Wed. 1845-2145

10.907 DISCUSSION LEADERSHIP

This course is designed for anyone who gets involved in a discussion leadership situation, whether formal or informal – supervisors, managers, group leaders, association representatives, union leaders, etc. It is aimed principally at the problem solving situation.

Persons completing this course will gain confidence and skill in getting the most out of an exchange within a group, a meeting, or a more formal conference.

Outline: Through lectures, demonstrations, and critiqued practice sessions the instructor will lead the group through the kinds of meetings for various situations, planning techniques, introducing the subject, question techniques, controlling the discussion, ensuring participation, summarizing, fixing responsibility, and ensuring follow-up action.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 12 Mon. 1845-2145

begins again:

Term 3 Apr. 6 Mon. 1845-2145

10.908 PROBLEM SOLVING AND DECISION MAKING

Persons completing this course will be able to apply a range of techniques to problems and decisions they face that will assist them in achieving a more satisfactory resolution.

Outline: Through lectures, demonstrations, critiqued practice sessions and actual applications, this course will clarify the common elements of problem situations and examine a variety of techniques and processes intended to make the problem-solver more effective. The course is concerned with practical, general purpose methods rather than sophisticated quantitative ones.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 15 Thur. 1845-2145

begins again:

Term 3 Apr. 9 Thur. 1845-2145

10.910 PERSONNEL MANAGEMENT

This 12-week introductory course is designed for those who have recently joined personnel or industrial relations departments or who plan to enter the field. It is also valuable to supervisors or managers who must implement

and are held accountable for administering personnel policies.

On completion of the course, students can expect to have a good understanding of the role of the personnel function, its relation to management, its responsibility to employees, and what it does.

Outline: Through lectures, case studies, and audiovisual aids, all of the major functions of the personnel department will be examined, with particular emphasis on the practical application of personnel policies and procedures. It includes such topics as employment wage and salary administration, administration of pension plans and insurances, employee relations, and other functions. These subjects are presented to show the breadth of these functions only and should be followed by supporting courses giving in-depth coverage on how to administer the various subject areas.

Term 1 Sept. 8 Mon. 1845-2145
Sept. 9 Tue.
Sept. 11 Thur.
Sept. 13 Sat. 0900-1200
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 12 Mon. 1845-2145
Jan. 13 Tue.
Jan. 15 Thur.
Jan. 17 Sat. 0900-1200

begins again:

Term 3 Apr. 7 Tue. 1845-2145
Apr. 9. Thur.

10.913 SELECTION INTERVIEWING

This course is presented for people in the field of personnel, management, or supervisors, and anyone who is called upon to interview applicants for employment.

This highly important skill is seriously underrated in most organizations.

Outline: The course identifies techniques, styles, stages, uses, pitfalls, and key points in interviewing, with particular emphasis on questioning techniques and selective listening. The classes will lean heavily to practice sessions on closed circuit television. With this need for individual attention the class is limited to 20 students.

Term 1 Sept. 9 Tue. 1845-2145
Sept. 11 Thur.
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 13 Tue. 1845-2145
Jan. 15 Thur.

begins again:

Term 3 Apr. 7 Tue. 1845-2145

10.914 MANPOWER PLANNING

Prerequisite: Personnel Management or equivalent

Members of a personnel department; training section, managers, supervisors, or people in a planning organization which involves "people resources" are those who will find this very practical.

The course will give participants the philosophy of some of the techniques of maximizing people potential in an organization.

Outline: Through lectures, group discussions, and case studies the instructor will lead the class to an understanding of the importance of manpower planning, methods of evaluating present resources, future projections, sources of supply, identifying training needs, related personnel policies, budgeting and costing, and program evaluation.

Term 2 Jan. 15 Thur. 1845-2145
12 weeks 1.0 Unit

10.915 TESTING

Prerequisite: Selection Interviewing or equivalent experience

(For personnel selection and career planning.) This basic course is designed to assist persons in personnel departments and administration departments in industry, business, hospitals, and education where selection and development of personnel is of concern. Supervisors, managers, and counsellors will find useful this practical orientation to the proper use of psychology tests. BCIT students who have completed 10.913 Selection Interviewing will find this aptitude testing course particularly supportive and appropriate.

Satisfactory completion of this course should enable the participants to understand the proper use of aptitude tests, their administration, scoring, and norms, and straightfoward interpretation of Level A tests; avoid unintentional abuse of tests and the data derived; appreciate when professional guidance and assistance are needed in a testing program and how to use supplementary analysis and reports from an industrial psychologist.

Note: Laboratory fee - $15 payable at registration

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 13 Tue. 1845-2145

10.916 COUNSELLING 1

This course will demonstrate that communication skills can be learned and that through training everyone can learn to become a more effective communicator.

The instructional method focuses on learning to discriminate various levels of communication. This is accomplished through lectures, listening, observing and actual practising.

Outline: The discrimination training will focus on empathy, respect, genuineness, concreteness, self-disclosure and confrontation. Audio video tape recordings, typescripts and live interaction will be used to develop effective ratings. Role playing and observer feedback are essential aspects in this developmental training.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 13 Tue. 1845-2145

begins again:

Term 3 Apr. 7 Tue. 1845-2145

10.917 COUNSELLING 2

Prerequisite: Counselling 1

Students will develop an awareness and basic understanding of a number of current models employed in communication and counselling.

The course will examine various applied communication models to recognize their differences, to see how these models can be applied and when a specific model seems appropriate to use.

Outline: a broad range of models such as: behavior modification; reality therapy; transactional analysis; rational-emotive therapy; client-centered and others will be studied.

Lectures, films, discussion and live class participation will be used to demonstrate the application of the various models.

Term 2 Jan. 15 Thur. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 3 Apr. 9 Thur. 1845-2145

10.918 OCCUPATIONAL SAFETY AND HEALTH (formerly Accident Prevention)

This course is for anyone who has responsibilities for occupational safety and health in an industrial setting. Managers, supervisors, shop stewards, safety committee members or members of the industrial relations or personnel department will find this presentation of practical value.

Outline: through lectures, films, and case discussions, the course will cover the important aspects of occupational safety and health, including the Worker's Compensation Act, Factories Act, rules and regulations, types of organization structure, the role of the committee, creating a "thinking" state of mind, promotional approaches, effective use of statistics, the pros and cons of reward systems, union/management cooperation, industrial hygiene, and other ways and means of getting this important job done.

This course is conducted by the B.C. Safety Council.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 14 Wed. 1845-2145

10.919 LABOR RELATIONS RESEARCH

Prerequisite: Working experience in labor relations or completion of a course in labor relations

This course will give an insight into the information used in collective bargaining and arbitration and familiarize students with survey techniques, statistical practices, case preparation, costing methods, pension plans, and how to present factual information in negotiations and

hearings. The course is designed primarily for people involved in preparing material for labor-management negotiations.

A student completing this course will be able to prepare factual data for negotiations and will understand the information presented; be able to cost wage, salary, and fringe-benefit proposals; be familiar with sources of information and have an understanding of research concepts.

Outline: The course emphasizes discussion following lectures and will employ mock bargaining to demonstrate the importance of emotional and political interference in the communication process. Guest speakers from labor and management will be invited to participate in lectures and discussions.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

10.924 MANAGEMENT BY OBJECTIVES

This course is designed for supervisors, administrators, managers and specialists who wish to improve their knowledge of the planning process in management.

On completion of this course, students will have a good knowledge of the philosophy, practices and procedures commonly known as "Management by Objectives".

Outline: Through lectures, discussion and group work, the class will cover: the case for planning relationship to strategic plans, identifying key areas, setting objectives, the management cycle and the styles of management in a climate appropriate to the process of managing by objectives.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit
begins again:
Term 2 Jan. 12 Mon. 1845-2145

10.940 SPECIAL PROJECT

This opportunity is offered to give advanced level BCIT continuing education students the opportunity to do an independent, in-depth study of an area of interest in the business management field under the guidance of an instructor.

In this project students will be able to take a real "live" problem or situation that they face in their work and tackle it with the guidance of an "expert" in the field. The specific objectives of the project will be set by the student himself.

Outline: If a student is interested in pursuing an avenue of study, he should approach a program consultant for assistance in putting forth his proposal for the project.

Unit: This course may be taken for one or two units of credit.

Fee: Calculated on basis of the project.

10.941 CONCEPTS OF ECONOMICS (formerly Basic Concepts of Economics)

This course is designed to provide an overview of the key ideas of economics for those students whose careers do not require a working knowledge of the formal aspects of economic analysis. It elucidates the contribution which a relatively few key ideas of economic theory can make towards the understanding of contemporary economic issues.

It will provide students with a framework of ideas which can be applied in other business courses and which can enhance the students' ability to critically assess the impact of government policies, legal constraints, and economic shocks upon the behavior of business firms, employees' and upon the political process.

Outline: Lectures, case studies and discussion will be used to cover the topics of inflation, unemployment, money, banking, credit price information, legal constraints, industrial relations, crime and the economics of organizations. Emphasis shall be on the study of several key markets including; the housing market, financial market and the job market.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit
begins again:
Term 2 Jan. 15 Thur. 1845-2145

10.950 TRAINING TECHNIQUES

This course is helpful to people with responsibility training of personnel in business, industry, government, municipalities, and institutions. Members of a personnel department contemplating a training program and supervisors will be particularly interested.

On completion of these 12 weeks the student will have a good grounding in current training methodology, techniques and aids.

Outline: Lectures, demonstrations, and practice sessions will cover such topics as learning theory, determining training needs, writing objectives, designing, training programs using outside resources and evaluation. Practice sessions will provide familiarity and skills in the effective use of visual aids.

Term 1 Sept. 8 Mon. 1845-2145
Sept. 10 Wed
12 weeks 1.0 Unit
begins again:
Term 2 Jan. 12. Mon. 1845-2145
Jan. 14 Wed.
begins again:
Term 3 Apr. 8 Wed. 1845-2145

10.954 OFFICE MANAGEMENT

This course is for new office supervisors or people anticipating a move into such a position.

It will provide knowledge and techniques so office supervisors can approach their job with increased confidence.

Outline: Lectures, case studies and group discussions are used to cover such topics as: clarification of the role of the supervisor, planning of work, delegation, establishment of systems and organization of methods, control, training and development of employees, assessing performance, communications, etc.

Note: This course is not recommended for those students who have completed Supervisory Skills.

Term 2 Jan. 15 Thur. 1845-2145
12 weeks 1.0 Unit

10.955 MANAGEMENT OF TIME

This course is designed for people in administrative positions who wish to improve their performance on the job and still have time to enjoy living.

On completion of the course students will have acquired knowledge and skills in using the basic tools of time management and a framework in which to make better discussions and to effectively manage their responsibilities.

Through films, lectures, assignments, discussions and direct application in individual work situations, as well as to personal life, a comprehensive analysis of time used and abused will furnish the student with a working knowledge of managing this resource.

Outline: time robbers – cause and cure; planning, setting goals and priorities; creative time analysis; deciding what not to do; ending procrastination forever; rediscovering lost time; overcoming the "paper work" habit; myths about hard work; a manager's time inventory, etc.

Term 1 Sept. 10 Wed. 1845-2145
Oct. 22 Wed.
6 weeks 0.5 Unit
begins again:
Term 2 Jan. 14 Wed. 1845-2145
Feb. 25 Wed.
begins again:
Term 3 Apr. 8 Wed. 1845-2145

10.957 MUNICIPAL LAW

In addition to providing the student with an overview of the B.C. Municipal Act and other provincial statutes governing local government activities, the course will cover those areas of administrative law, constitutional law and contract law, as they impact upon municipal administrative practice.

The course will give students the basics of the law as it applies to the operation and management of municipalities of B.C.

Outline: This course includes the development of a working knowledge of the B.C. Municipal Act, municipal powers and duties, municipal councils, elections, by-laws, acquisition and disposal of land, contracts and franchises, revenues, assessment and taxation, actions by and against municipal government, B.C. statutes and case law relating to the principal services provided by municipal authorities.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit
begins again:
Term 2 Jan. 15 Thur. 1845-2145

10.970 CANADIAN BUSINESS CONCEPTS – CIM

(Year 1 of program)

This course provides an overview of Canadian business and the various environmental factors, both internal and external which affect the operation of a business. Specific areas such as personnel, production, marketing and finance will be examined in order to expose the student to the total organization and to show how the other departments relate to the area in which he is currently involved. Management itself is examined in relationship to what is normally considered to be the functions of management (planning, organizing, staffing, directing and controlling) as well as to the various leadership styles. Managing in both unionized and non unionized organizations will be discussed.

On completion of this course, students will have become aware of the interactive nature of organizations and will understand the importance of their studying in the areas of economics, law, interpersonal behavior, marketing, organizational behavior, management information systems, job design and accounting, as they prepare themselves to carry increased responsibilities as managers.
Term 1

10.971 MANAGERIAL ACCOUNTING – CIM

(Year 1 of program)

Managerial Accounting exposes the student to accounting theory and logic, cost control and profit planning, and an appreciation of the techniques of financial analysis.

Accounting theory and logic deals with relatively simple financial statements, how to read and understand them. The student is not expected to prepare financial statements.

Accounting for cost control and profit planning explores the management tools provided through the accounting information systems: standard cost accounting, budgetary control, and cost/volume/profit relationships. This section of the course will give the student an appreciation of the benefits to be gained from a sound financial information system.

Emphasis is on the interpretation, analysis and use of accounting data. The mechanics of bookkeeping and techniques of producing accounting data are not considered to be relevant to the objectives of the CIM course, and are not covered.
Term 2

10.973 ORGANIZATIONAL AND HUMAN BEHAVIOR – CIM

(Year 2 of program)

Organizational and Human Behavior will explore inter-relationship of individual personality and work, the characteristics of organizations and occupation and relationships of the first two factors to the business and economic dimensions of society.

Included as part of the major areas of discussion are the structure of the organization in relation to the goals of the organization, integration of the reward system and the objectives of the organization, the management of communication, and the dynamics of groups.
Term 2

10.974 MARKETING – CIM

(Year 3 of program)

This course is designed to introduce the student to the "Systems" idea of the marketing concept as practiced in marketing management. It will assist the student to develop a functional judgement of the role each of the controllable variables plays in the marketing mix. The course is designed to give breadth of understanding and appreciation rather than depth.

Upon completion of this course the student will: understand the nature, purpose and process of marketing, its importance to the Canadian economy, and to the individual firm; learn to identify and solve marketing problems in general terms; learn to evaluate the marketing mix of a firm.
Term 1

10.975 OPERATIONS MANAGEMENT – CIM

(Year 3 of program)

This course is designed to give the student a broad familiarity with the field of operations management and a comprehensive appreciation of some of the problems faced by different types of enterprises (private and public) in the management of their productive systems.

Upon completion of this course, the student will: understand the nature, purpose and processes associated with operations management; its relevance to facilities design, operations, planning and control to the individual firm; learn to identify and solve operational problems in general terms; learn to evaluate the systems approach to operations management.
Term 2

10.976 FINANCE – CIM

(Year 4 of program)

This course will familiarize students with the tools and methodology of the financial analyst, and provides a basic understanding of the concepts of financial analysis. Text and case material are designed to integrate the financial perspective with a general management overview. On completion students will be in a position to make critical appraisals in such areas as ratio and statement analysis, the tax environment, interest rates and the value of money, capital budgeting and long term financing, working capital management, capital structure, equity financing, break-even analysis, budgeting and cash flow analysis.

Particular attention is paid to financial statement analysis and a major portion of out-of-classroom time will be spent on analytical projects. A field trip to the Vancouver Stock Exchange and to a major stock brokerage firm is included.

As the financial overview is a prime consideration in most business discussions, this course will prepare the students to ask pertinent, financially oriented questions in the normal course of management decision-making. The course also prepares the student for the second term policy and administration course which relies exclusively on case material and a seminar format to develop students' understanding of related issues.
Term 1

10.977 POLICY AND ADMINISTRATION – CIM

Year 4 of program)

This course will enable students to acquire a "general management" perspective through the application and integration of the material studied in the first three and a half years of the course to the analysis of complex business problems of the type encountered at the "general management" level; exchange views, attitudes and experiences with other students and through a discussion of actual case histories to develop individual and group administrative abilities and the capacity to express ideas coherently in both spoken and written form.

Case histories in policy formulation are designed to expose the student to a wide range of business problems involving the examination of a company's opportunities, competence, aspirations and responsibilities. The student is then expected to assess the objectives of the company, develop a strategy for achieving them and point the way toward organizing to get the job done. In attempting to deal with these "overall" problems, he begins to see how the individual parts of the company (finance, engineering, production, marketing, administrative organization, people, etc.) have to be coordinated and integrated if the company is to achieve acceptable profit levels.
Term 2

10.978 CANADIAN BUSINESS LAW – CIM

(Year 2 of program)

This course provides an overview of Canadian Business Law to give the prospective manager an understanding of the facets of commercial law that are relevant to his future role.

Topics of study include contract law, jurisprudence, organization of courts, tort law, subjects involved with guarantee agency, employment, mechanics liens, sale of goods, bailment, corporation, and bankruptcy, etc. Students will acquire a broad understanding of the principles of business law and will be able to determine specifically what legal problems should be turned over to a lawyer.

All CIM courses are offered at the main BCIT campus, on Mondays, 1845 to 2145 hours. For details, please refer to our fall term flyer, or contact CE Program Information.

BROADCAST COMMUNICATIONS TECHNOLOGY

Certificate Program in Broadcast Communications

Students seeking a Certificate in Broadcast Communications should be prepared to complete a minimum of 10 units in broadcast subjects, plus an additional 5 units from broadcast or other business courses. At least two courses in each of the radio, television, and broadcast journalism areas must be included in the 10 units.

Students who wish to enter the second year of the day school program may do so by acquiring an additional 9 units after completing the above requirements.

Thus students completing 24 units and **who meet the normal entry requirements** may enter the second year of the day school program providing that in addition to the broadcast courses they take two approved business administration courses, two approved courses in English and also 12.510/610 Industry Organization. They must also attend the intersession course which is being developed.

All applications for entry to Broadcast Communications courses must be approved by a Program Consultant or a member of the broadcast staff. A member of the Broadcast Communications staff is available for consultation each Monday evening at 1700 hours in room 129 commencing August 18, 1980 to June 25, 1981 excluding holidays.

12.510/610 INDUSTRY ORGANIZATION

This course is for students who are now in the broadcast field and are seeking advancement, for students in the Certificate Program or for anyone planning to enter the 2nd year day school Broadcast Communications Technology.

It will give the students in broadcast a firm grounding in the complex rules and regulations, and structure of the broadcast industry. This course will require one major term paper plus term examinations.

Outline: Beginning with the background historically of broadcasting in Canada, the student will be given detail in all regulations and laws governing broadcasting in Canada. In addition, structure of the radio and television industry in Canada will be studied in some depth.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit Special Fee $150

continues:

Term 2 Jan. 13 Tue. 1845-2145
12 weeks 1.0 Unit Special Fee $150

Limit 22 persons

12.512 TV PRODUCTION (formerly TV Advanced 1)

Prerequisite: 12.902 Television Broadcasting - Introduction

The course is designed for those students who wish to continue with their practical learning, and who have completed 12.902 Television - Introduction.

It will give the student more time in actual studio work and provide a series of lectures to broaden their knowledge on how the equipment works and the proper procedures to use.

Outline: Each evening will include one lecture period, with the remainder of the time spent in setting up and shooting various productions. These will include interviews, demonstrations, commercials and promos. In order to accomplish these productions, students will be encouraged to add a more professional polish to their work, and special techniques and procedures will be explained to help them attain this goal.

Note: This course will run September to December only.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit Special Fee $150

Enrolment limit of 22 students.

12.612 TV OPERATIONS (formerly TV Advanced II)

Prerequisite: 12.902 Television Broadcasting - Introduction

This course is designed to give students the opportunity of doing continuous operations that simulate a portion of a TV station's regular day. Applicants must have completed 12.902 Television Introduction.

Outline: This course is designed to give the student hands-on experience in operating all the TV equipment in the same manner that a station does in its hour-by-hour operations. They are taught to prepare TV logs – and subsequently how to run the station exactly to time using their log. The objective is to attain a sustained period of operations that is fault-free, and with all elements occurring at their logged times.

Note: This course will run January to April only.

Term 2 Jan. 12 Mon 1845-2145
12 weeks 1.0 Unit Special Fee $150

Enrolment limited to 22 students.

12.901 RADIO BROADCASTING – INTRODUCTION

This course is for people keenly interested in radio broadcasting as a career and for people currently employed in non-broadcast positions in the industry who are interested in moving into the broadcast area of a radio station.

This course (or industry experience) is a prerequisite for the intensive radio courses: 12.911 Radio: Commercial Production and 12.921 Radio: Lab.

Outline: The course introduces the student to broadcast radio equipment, stations operations and procedures.

Much practical work on equipment leads to the preparation and presentation of simulated radio station operations. Students learn by rotating through various positions in these labs.

Term 1 Sept. 8 Mon. 1845-2145
Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit Special Fee $100

begins again:

Term 2 Jan. 12 Mon. 1845-2145
Jan. 15 Thur. 1845-2145

begins again:

Term 3 Apr. 6 Mon. 1845-2145
Apr. 9 Thur. 1845-2145

Enrolment limited to 22.

12.902 TELEVISION BROADCASTING - INTRODUCTION

This course is designed for persons in the industry, working in non-program areas or those outside the field who will benefit from knowing more of the "how" and "why" of television.

On completion of this course students will have an elementary knowledge of television production techniques.

Outline: Progressively through the course, the student is introduced to the many pieces of television equipment that are necessary to operate a station. The theory of operation and the proper procedures are explained in detail. The students also operate the equipment in production exercises with the ultimate goal of producing a full-length program.

Term 1 Sept. 8 Mon. 1845-2145
Sept. 11 Thur.
12 weeks 1.0 Unit Special Fee $100

begins again:

Term 2 Jan. 12 Mon. 1845-2145
Jan. 15 Thur.

Term 3 Apr. 5 Mon.
Apr. 9 Thur.

Enrolment limited to 22 persons.

12.903 FILM FOR BEGINNERS

People with an interest in cinematography or with limited experience are invited to participate.

This course will provide an introduction to the basics of professional film-making including scripting, equipment operation, and filming techniques.

Outline: In discussion and workshops, the course material will cover optical and magnetic sounds, animation, special effects, lighting, and editing.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit Special Fee $100

begins again:

Term 2 Jan. 14 Wed. 1845-2145

begins again:

Term 3 Apr 8 Wed. 1845-2145

Enrolment limited to 22.

12.905 COPYWRITING – RADIO AND TV

This course is ideal for non-production or writing employees in the broadcast industry looking for a move to this area or for any person wishing to know "how it's done".

Outline: The course will cover the "how's" and "why's" of writing radio and TV commercials with considerable practice and evaluation.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 14 Wed. 1845-2145

begins again:

Term 3 Apr. 8 Wed. 1845-2145

Enrolment limited to 25.

12.908 BROADCAST NEWS WRITING

This course will aid those in the news field who wish to develop additional skills, those with a general interest in the field, and employees in the broadcast industry who wish to add news to their present skills.

Students can expect to improve their oral and visual newswriting skills.

Outline: The course covers the techniques and skills used in writing news for radio and television. Practical demonstration, assignments, and practice sessions will be used to develop these skills.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 14 Wed. 1845-2145

begins again:

Term 3 Apr. 8 Wed. 1845-2145

Enrolment limited to 25.

12.911 RADIO: COMMERCIAL PRODUCTION

Prerequisite: 12.901 Radio Broadcasting - Introduction or relevant industry experience

This course is for people who have completed 12.901 Radio Broadcasting – Introduction, or who have industry experience, and who wish to learn how to produce radio commercials and sound features.

Outline: Students will learn the theories and techniques used in modern radio commercial production and audio recording. There will be an accent on practical work done by the student – putting theory into practice.

Evaluations will be based on industry standards. Techniques learned can be applied to many other aspects of sound work.

Term 2 Jan. 14 Wed. 1845-2145
12 weeks 1.0 Unit Special Fee $100

begins again:

Term 3 Apr. 8 Wed. 1845-2145

Enrolment limited to 22 students.

12.912 RADIO AND TELEVISION ANNOUNCING

Prerequisite: A voice audition may be required.

This course will provide students with introductory skills and practice in this important function.

It will improve presentation, articulation; and provide a familiarity with basic announcing skills.

Outline: Students will be exposed to several styles of announcing techniques and will be given sufficient time for practice.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit Special Fee $85

begins again:

Term 2 Jan. 14 Wed. 1845-2145

begins again:

Term 3 Apr. 8 Wed. 1845-2145

Limited enrolment 22 persons.

12.913 BROADCAST JOURNALISM – INTRODUCTION

This course provides a basic introduction to all aspects of news operations in the broadcast industry.

On completion of the course students will have sufficient knowledge of the subject to understand the basics of newsroom operation in radio and television stations.

Outline: The course content includes reporting, presentation and content of radio and TV news.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 13 Tue. 1845-2145

begins again:

Term 3 Apr. 7. Tue. 1845-2145

Limited enrolment 22 persons.

12.921 RADIO: LAB

Prerequisite: 12.901 Radio Broadcasting - Introduction or relevant industry experience

This course is for people who have completed 12.901 Radio Broadcasting – Introduction. It will provide 36 hours of advanced practical lab time in the radio lab facilities.

Most students who complete the Radio Broadcasting – Introduction course find they are just gaining dexterity and familiarity with equipment and operations procedures as the intro course comes to an end. The Radio: Lab course will allow those who want more experience to continue simulated station operations for a further 12 weeks, to gain more competence and confidence.

Outline: Students will rotate through various on-air and operations positions.

Group and individual evaluations will be held after simulation sessions to critique performance. Over the duration of the course, techniques and abilities should be greatly improved.

Term 2 Jan. 13 Tue. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 3 Apr. 7 Tue. 1845-2145

Enrolment limit of 22 students.

COMPUTER SYSTEMS TECHNOLOGY

Business Certificate in Computer Systems Technology

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
14.050 Data Processing – Introduction	1.0	14.902Computer Programming – Assembler 1	1.0	Elective	1.0
16.140 Accounting	1.0	16.240 Accounting 2	1.5	or Computer Programming – "High Level" Language (see list below)	1.0
Year 2					
14.903 Computer Programming – Assembler 2	1.0	Computer Programming – "High Level" Language (see list below)	1.0	Elective	1.0
Elective	1.0	Elective	1.0	or Computer Programming – "High Level" Language (see list below)	1.0
Year 3					
14.505 Computer Systems – Introduction	1.0	14.605 Computer Systems – Introduction	1.0		
or 14.515 Computer Systems Development	1.0	or 14.615 Computer Systems Development	1.0		
Computer Programming – "High Level" Language (see list below)	1.0	Elective	1.5		

The specified courses shown above (i.e., other than electives) are normally required for the basic certificate. Elective courses may be selected from the list shown on the following page. Two units of "high level" languages are required. These units may be selected, in any combination, from the following list.

14.503	Computer Programming PL/1	1.0
14.603	Computer Programming PL/1	1.0
14.909	Fortran IV Basic	1.0
14.913	Fortran IV Intermediate	1.0
14.917	Fortran IV Advanced	1.0
14.919	Basic – Interactive Programming 1	1.0
14.920	Basic – Interactive Programming 2	1.0
14.923	Computer Programming – Introductory COBOL	1.0
14.924	Computer Programming – Advanced COBOL	1.0
14.927	RPG II – Introduction	1.0

At least six units (including Accounting) must be non-computer courses. A total of 15 units are required for the basic certificate.

Students working on a high level certificate such as the Senior Business Certificate should choose not more than 50 percent of their courses from non-computer electives.

Note: 1. Students with a university degree or graduates from BCIT with a National Diploma of Technology may receive a Special Certificate by taking 15 units of further part-time studies (see page 7).

2. Students with programming experience or managerial experience in a business environment should consider taking 14.515/615 Computer Systems Development instead of 14.505/605 Computer Systems Introduction. For clarification, read the course descriptions in the calendar and contact the Computer Systems Technology Coordinator.

3. The sequence of the courses shown is not mandatory. Students may alter the sequence to suit their needs.

Electives and Substitutions

Selections should be approved in advance, in writing, by a Program Consultant to ensure that they are appropriate and will be accepted as an elective or substitute.

Electives and substitutions may be selected from any course listed in the Computer Systems Technology, or such courses as:

		Units
10.131	Management in Industry	1.0
10.135/235	Economics 1 and 2	2.5
10.232	Management in Industry 2	1.0
10.905	Managerial Styles	1.0
16.341/441	Cost Accounting 1 and 2	2.5
16.347/447	Financial Accounting 1 and 2	2.5
20.502/602	Oral Communications and Public Speaking 1 and 2	2.0
20.914	General Marketing	1.0
22.100	Basic Mathematics of Finance	1.0
22.935	Statistics for Business and Industry	1.5
22.941	Method Study – Manufacturing	1.0
22.943	Performance Measurement	1.0
22.944	Project Study – Manufacturing	0.5
22.948	Method Study – Office	1.0
22.952	Systems and Procedures – Manual	1.0
22.953	Project Planning and Scheduling	1.0
22.954	Project Study – Office	0.5
22.956	Management Information Systems	1.0
22.963	Mathematics for Management	1.5
31.910	Business and Technical Correspondence	1.0
31.912	Business Report Writing	1.0
43.507/607	Digital Techniques 1	2.0

or courses in the Business Management Division may be selected with approval of the Program Consultant. In selecting electives, students are advised to read the current calendar and determine what courses they feel would be appropriate for their certificate program.

14.050 DATA PROCESSING – INTRODUCTION

This course will introduce the principles and concepts of business data processing to people with little or no experience in this area. The course may be useful to people who need an understanding of a computer operation in their firm. For people considering the computer field as a career, this course is a prerequisite for most of the systems and programming courses in this technology.

Outline: A mixture of lecture and laboratory sessions with "hands-on" computer experience will include introduction to the computer: input/output, hardware, uses of computers, background, data representation. Applied systems: files, magnetic tape and disk, master and transaction files, data entry and control, batch processing, on-line data entry. Computer programming: flowcharting, input/output, processing, decisions, arithmetic, branching.
Students will write and test five programs in the BASIC programming language.

Term 1 Sept. 8 Mon. 1845-2145
Sept. 9 Tue.
Sept. 10 Wed.
Sept. 11 Thur.
Sept. 13 Sat. 0900-1200
12 weeks 1.0 Unit
begins again:
Term 2 Jan. 12 Mon. 1845-2145
Jan. 13 Tue.
Jan. 14 Wed.
Jan. 15 Thur.
Jan. 17 Sat. 0900-1200
12 weeks 1.0 Unit
begins again:
Term 3 Apr. 6 Mon. 1845-2145
Apr. 7 Tue.
Apr. 8 Wed.
Apr. 9 Thur.
Apr. 11 Sat. 0900-1200
12 weeks 1.0 Unit
Please indicate a preference of day you wish to attend and an alternative.

14.052 COMPUTERS IN BUSINESS

Prerequisite: 14.050 Data Processing - Introduction or permission of the technology coordinator

This course is designed for those who are not directly involved in data processing but require a familiarity with the current terminology and concepts being used in the computer industry. Participants will be required to have a basic understanding of programming and computer systems.

Upon completion of the course students should be able to communicate effectively with data processing personnel, recognize the potential use of computers in a business environment, and understand the implications of installing an in-house computer or data centre system.

Outline: This course uses a combination of lectures, laboratory sessions and discussion groups to cover topics such as: the "state of the art" of computer equipment and programming, data entry techniques, batch, on-line and distributed processing, telecommunications, control and security over computers, the criteria for evaluating and selecting various computer systems and the implications computers have on the financial and staff resources of companies. Students will analyze the characteristics of several computer systems which can be used to meet the computer needs of a medium-sized company.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit
begins again:
Term 2 Jan. 13 Tue, 1845-2145

14.503 COMPUTER PROGRAMMING PL/1

Prerequisite: 14.902 Assembler 1 or permission the technology coordinator

This course will allow students who have had some previous programming experience to learn the PL/1 "high level" language using typical business programming techniques.

On completion of this course the student can expect to be able to code, test and debug PL/1 programs of a relatively complex nature.

Outline: Each three-hour period consists of a mixture of lecture and lab sessions. Topics include data declaration, record and stream I/O, PL/1 arithmetic, structures, arrays, built-in functions, procedure and Begin blocks.

Term 1 Sept. 10 Wed. 1845-2145
Sept. 11 Thur.
12 weeks 1.0 Unit

14.505 COMPUTER SYSTEMS – INTRODUCTION

Prerequisite: 14.050 Data Processing - Introduction or permission of the technology coordinator

This course will allow persons to develop their analysis skills and learn basic computer systems design techniques. Emphasis is on systems design fundamentals and file organizations.

Upon finishing this course, the student should proceed to 14.605 to learn more techniques and applications in systems design. A thorough knowledge of file designs and organizations is completed in this course.

Outline: Introduction to the general systems cycle of analysis, design and implementation. Topics are data gathering techniques, controls, systems flowcharting, decision tables and forms design. File designs and organizations for cards, tape and disk are discussed in detail.

Term 1 Sept. 8 Mon. 1845-2145
Sept. 10. Wed.
12 weeks 1.0 Unit

14.515 COMPUTER SYSTEMS DEVELOPMENT

Prerequisite: 14.505/605 Computer Systems - Introduction or an advanced programming course, or permission of the technology coordinator.

This course will provide a working knowledge of the practice of systems analysis, and develop the job skills and techniques related to the design of information processing systems.

On completion of the course the student will be able to contribute actively in the investigation analysis and design phases of systems development projects. Upon finishing this course the student should continue with 14.615 where the implementation phases of the systems development life cycle are covered.

Outline: By means of a combination of lectures, discussion and extensive case study practice, students are guided through phases of systems design including feasibility studies, fact finding and analysis and design alternatives. Other topics covered include forms design, hardware considerations, standards and documentation.

Course materials to be purchased: "A Case Study for Systems Analysis and Design

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit Special Fee $100

14.603 COMPUTER PROGRAMMING PL/1

Prerequisite: 14.503 Computer Programming PL/1

Students will learn the PL/1 "high level" language using typical business programming techniques.

On completion of this course students will be able to code text, and debug PL/1 programs of a relatively complex nature.

Outline: Continuation with 14.503, tapes and disk processing; and more advanced programming techniques and language features.

Term 2 Jan. 14 Wed. 1845-2145
Jan. 15 Thur.
12 weeks 1.0 Unit

14.605 COMPUTER SYSTEMS – INTRODUCTION

Prerequisite: 14.505 Computer Systems - Introduction or permission of the technology coordinator

This course will allow persons to develop their analysis skills and learn basic computer systems design techniques. The techniques include common business applications as processed on small to medium-sized computers.

The student is expected to have taken 14.505 and the course is taught on the basis that the fundamentals covered in 14.505 are known. On completion of the course a student can expect to be able to gather and organize systems data, prepare systems flowcharts, design files, set up an implementation schedule and other documentation.

Outline: Coding structures and application systems like invoicing accounts payable and accounts receivable are discussed in detail. Scheduling techniques like Gantt charts, PERT/CPM are introduced.

The roles of data communications, data base usage and small computers in systems design are also discussed. A major systems project utilizes the material presented in 14.505 and 14.605.

Term 2 Jan. 12 Mon 1845-2145
Jan. 14 Wed.
12 weeks 1.0 Unit

14.615 COMPUTER SYSTEMS DEVELOPMENT

Prerequisite: 14.515 Computer Systems Development

This course will provide a working knowledge of the practice of systems analysis and develop the job skills and techniques related to the implementation of information processing systems.

On completion of the course the student will be able to contribute actively in the documentation and implementation phases of systems development projects.

Outline: By means of a combination of lectures and discussion, and a continuation of the case study from Term 1, students are guided through phases of documenting and implementing systems. Other topics covered include controls, communication techniques, scheduling systems conversion and post implementation auditing.

Term 2 Jan. 12 Mon. 1845-2145
12 weeks 1.0 Unit Special Fee $100

14.902 COMPUTER PROGRAMMING – ASSEMBLER 1

Prerequisite: Second class standing (65% or better) in Data Processing - Introduction or equivalent data processing experience and permission of the technology coordinator

This course will provide an introduction to programming for those persons intending to become computer programmers. Assembler language is used so that the student will become more familiar with the actual programming steps taken by the computer.

On completion of the course students can expect to be able to produce working, fully documented assembler programs for elementary business problems.

Outline: By means of a combination of lectures and workshop practice, students will write, test and debug a series of assembler programs that illustrate the problems encountered in the business data processing field. Topics include computer storage; devices; assembler instruction set; decimal, binary and hexadecimal number systems; character and packed data; decimal arithmetic operations. Other topics are problem analysis; flowcharting; coding and testing; debugging; programming standards; documentation, control and validation of data; data controls; multi-level totals.

Term 1 Sept. 9 Tue. 1845-2145
Sept. 10 Wed.
Sept. 11, Thur.
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 13 Tue. 1845-2145
Jan. 14 Wed.
Jan. 15 Thur.

begins again:

Term 3 Apr. 7 Tue. 1845-2145
Apr. 8 Wed.
Apr. 9 Thur.

Please indicate a preference of day you wish to attend and an alternative.

14.903 COMPUTER PROGRAMMING – ASSEMBLER 2

Prerequisite: Computer Programming - Assembler 1

This course will provide a continuation of the introductory course 14.902 Computer Programming – Assembler 1 and more detailed practical knowledge of IBM assembler language and computer architecture.

On completion of the course a student can expect to be knowledgeable about the architecture and principles of operation of the IBM computer: be able to use assembler language in common business programming situations.

Outline: This course includes lecture and problem sessions. Topics include: assembler instruction formats, binary instructions, registers, base/displacement addressing, tables and table look-up techniques, subroutines and program structure, and IOCS: file definition and imperative macros.

Term 1 Sept. 8 Mon. 1845-2145
Sept. 11 Thur.
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 12 Mon. 1845-2145
Jan. 15 Thur.

begins again:

Term 3 Apr. 6 Mon. 1845-2145
Apr. 9 Thur.

14.904 COMPUTER PROGRAMMING – ASSEMBLER 3

Prerequisite: Computer Programming - Assembler 2

This course will provide an advanced knowledge of assembler language and ability to write extensive programs in assembler language. Persons already employed in programming will find this couse helpful in broadening their understanding of programming concepts and IBM operating systems.

On completion of the course a student can expect to understand input/output control and operating interfaces; be able to use the assembler macro language; use magnetic tape and disk storage devices.

Outline: A mixture of lectures and laboratory exercises provide practical experience and cover operating system interfaces, tape and disk storage, macro writing, subprograms, Logical IOCS operations.

Term 2 Jan. 14 Wed. 1845-2145
18 weeks 1.5 Units

14.909 FORTRAN IV – INTRODUCTORY

Prerequisite: Grade 12 mathematics and 14.050 Data Processing - Introduction

This course will allow students who have some introductory experience of computers and computer programming, to gain an insight into one "high-level" programming language. Students already familiar with another programming language will find the course helpful in broadening their outlook on computing in general. Introductory FORTRAN IV is intended as a preparation for 14.913 Intermediate FORTRAN IV.

On completion of the course, students will have sufficient knowledge and experience in the use of FORTRAN IV, to enable them to design, flow-chart, write, test and debug simple computer programs as assigned.

Outline: The course consists of a balance between lectures, tutorials, and practical experience in designing, flow-charting, writing, testing and debugging simple computer programs as assigned. Topics include the syntax and use of a subset of the statements comprising the FORTRAN IV language; the application of these statements to solve simple numeric problems; and preparation and submission of programs to an available computer.

Term 1 Sept. 10 Wed. 1845-2145
Sept. 11 Thur.
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 14 Wed. 1845-2145

begins again:

Term 3 Apr. 8 Wed. 1845-2145

14.913 FORTRAN IV – INTERMEDIATE

Prerequisite: 14.909 FORTRAN IV - Introductory

This course will provide students with a continuing progression into aspects of the FORTRAN IV language beyond those covered in 14.909 FORTRAN IV – Introductory.

On completion of the course, students will have expanded their knowledge and experience in the use of FORTRAN IV, to enable them to design, flow-chart, write, test and debug both programs as assigned and programs within their own field of endeavor; follow the logic within programs written by others.

Outline: The course consists of a balance between lectures, tutorials, and practical experience. Topics include the syntax and use of FORTRAN IV statements as related to areas such as: double precision and logical constants, variables and expressions; subroutine, function and block data subprograms; processing sequential files on tape and disk devices; the application of these statements to solving both numeric and non-numeric problems; preparation and submission of programs to an available computer.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 14 Wed. 1845-2145

14.917 FORTRAN IV – ADVANCED

Prerequisite: 14.913 FORTRAN IV - Intermediate

This course will provide students with a continuing progression into aspects of the FORTRAN IV language beyond those covered in 14.913 FORTRAN IV Intermediate.

On completion of the course, students will be able to make a meaningful contribution with a

minimum of supervision, to projects assigned in industry.

Outline: The course consists of a balance between lectures, tutorials, and practical experience. Topics include the syntax and use of FORTRAN IV statements related to areas such as complex variables, constants and expressions; varying dimensions of arrays and format elements during processing of a program; processing direct access files on disk devices; the application of these statements to solving both numeric and non-numeric problems; preparation and submission of programs to an available computer. Emphasis will be placed on students developing programs within their own field of endeavor rather than on assigned projects.

Term 2 Jan. 15 Thur. 1845-2145
12 weeks 1.0 Unit

14.919 BASIC – INTERACTIVE PROGRAMMING 1

Prerequisite: 14.050 Data Processing Introduction

This course will provide introductory programming for those who intend to work using the BASIC language on an interactive computer terminal system.

On completion of the course, students can expect to produce working programs for elementary business problems, and have a reasonable knowledge of the BASIC language.

Outline: By means of a combination of lectures and "hands-on" experience on the BCIT Hewlett-Packard computer, students will write, test and debug a series of programs that illustrate the problems encountered in the business data processing field. Topics include logical development of a program, problem analysis; flowcharting, coding and testing, debugging; validation of data; data totals; two levels of totals; print formatting, system commands; sequential disk storage.

Term 1 Sept. 8 Mon. 1845-2145
Sept. 11 Thur.
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 12 Mon. 1845-2145
Jan. 15 Thur.

begins again:

Term 3 Apr. 6 Mon. 1845-2145
Apr. 9 Thur.

14.920 BASIC – INTERACTIVE PROGRAMMING 2

Prerequisite: BASIC - Interactive Programming 1

This course will provide advanced programming for those persons who expect to work with the BASIC language on an interactive computer terminal system.

On completion of the course, the student should be able to program effectively and efficiently in BASIC on an interactive minicomputer.

Outline: The course includes lecture and practical "hands-on" experience on the BCIT Hewlett-Packard minicomputer. Topics include tape and disk storage, file processing, sequential and direct disk accessing, print formatting, arrays, BASIC instruction set, system commands, functions, subroutines, program efficiency, the interpreter concept.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 14 Wed. 1845-2145

begins again:

Term 3 Apr. 8 Wed. 1845-2145

14.921 DATA COMMUNICATIONS 1

Prerequisite: Programming or Systems Design experience or permission of the technology coordinator

This course provides an introduction to the analysis and design of business and data communications systems. With the rapid changes in telecommunications, this course could be valuable to systems programmers and analysts, including individuals directly or indirectly involved in the communications or computer industry.

Upon completion of the course students will be conversant in the area of data communications and will be capable of assisting in the analyzing and designing of data communications systems for business applications.

Outline: the basic principles of data communications; the various types of terminal equipment and their characteristics; the line facilities and service offerings as provided by the common carrier companies and the economics of these services and equipment. Computer teleprocessing and timesharing are briefly covered.

14.922 DATA COMMUNICATIONS 2

Prerequisite: 14.921 Data Communications 1 or permission of the technology coordinator

This course is a continuation of Data Communications 1. This course covers the problem of designing a data communication system and presents the analytic tools necessary in determining variables (i.e. number of terminals, number of lines, speed of lines, type of terminal, etc.) of such a system.

The objective of this course is to give the student the necessary quantitative as well as qualitative methods necessary to design a cost effective data communications system.

Outline: The course systematically presents the analytical tools necessary to develop a data communications system. The terminal through the modems, lines, control units, software and finally the CPU are analyzed. Basics of probability and statistics and queuing theory are presented so that the design methods will be understood. Various DC systems are modelled and their parameters studied.

14.923 COMPUTER PROGRAMMING – INTRODUCTORY COBOL

Prerequisite: 14.050 Data Processing - Introduction or permission of the technology coordinator

For persons who want to learn business computer programming using the widely used "high level" language COBOL. The course is also suitable for accountants or accounting students who want to understand programming in a data processing environment. For those who want to program in COBOL as a career, this couse serves as preparation for 14.924 Advanced COBOL.

On completion of the course, the student will know and be able to apply the basic principles and practices of business computer programming and be able to write simple programs in COBOL.

Each three-hour period is a mixture of lectures and lab sessions.

Outline: a programming method, structured programming, documentation standards, flowcharting, report design, sequence checks, page overflow, and control breaks. COBOL topics include all language components required to write simple business report programs. Students will write, compile and run COBOL programs using BCIT's IBM computer.

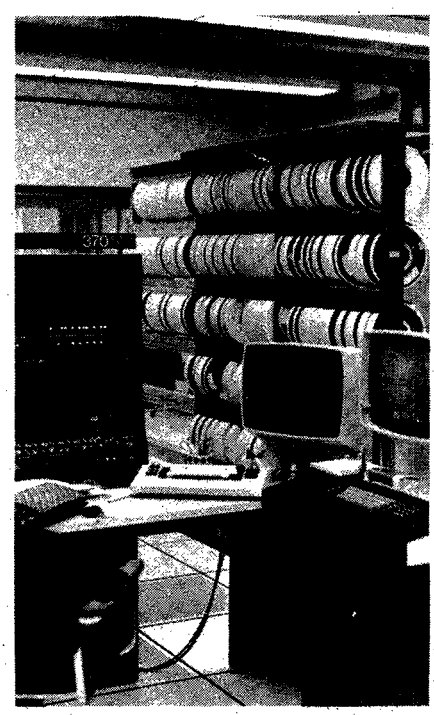
Term 1 Sept. 8 Mon. 1845-2145
Sept. 9 Tue.
Sept. 11 Thur.
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 12 Mon. 1845-2145
Jan. 13 Tue.
Jan. 15 Thur.

begins again:

Term 3 Apr. 6 Mon. 1845-2145
Apr. 7 Tue.
Apr. 9 Thur.



14.924 COMPUTER PROGRAMMING - ADVANCED COBOL

Prerequisite: 14.923 Computer Programming - Introductory COBOL or previous programming experience in COBOL

This course is designed for persons who want to write COBOL programs in a data processing environment using disk and tape files.

On completion of the course students will have a good understanding of tape file organizations and the COBOL instructions associated with tape files; disk file organizations, including indexed-sequential, and random access files, and the COBOL instructions associated with their use; utility programs and proper libraries; special techniques.

Outline: efficient COBOL programming techniques, sequential and binary table look-ups, subprograms, overlay techniques, multiple disk and tape file handling, indexed sequential and direct (random) file organizations, and all the associated COBOL instructions. The disk libraries, DOS utility support, and sort programs are also taught. The students write a number of programs which apply these techniques.

Term 1 Sept. 8 Mon. 1845-2145
Sept. 10 Wed.
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 12 Mon. 1845-2145
Jan. 14 Wed.

begins again:

Term 3 Apr. 6 Mon. 1845-2145
Apr. 8 Wed.

14.926 COMPUTER OPERATIONS MANAGEMENT

Prerequisite: Practical operations experience or permission of the technology coordinator.

The course is intended for experienced operators, shift supervisors, or operations manager candidates, to provide theoretical and practical training in operations management.

On completion of the course the student can expect to understand commonly used techniques and the responsibilities of computer operations management.

Outline: With a mixture of lectures, discussion and practising techniques, topics include standards policy, department organization and training, budgeting estimating and costing, planning, forecasting and scheduling, performance measurement, personnel evaluation, security.

14.927 RPG II – INTRODUCTION

Prerequisite: 14.050 Data Processing - Introduction

This course will teach the fundamentals of programming in RPG II to people who have an understanding of data processing concepts.

It will provide students with an understanding of RPG II programming concepts and techniques as applied in business batch processing applications. On completion, students will be able to write programs of medium complexity.

Outline: The course is a combination of lecture and practical programming. The student will develop, write, test and run three batch programs. Topics include disk and card input, printed output, the basic RPG II logic cycle, control breaks, matching records, arrays, tables, and programming techniques.

Term 1 Sept. 8 Mon. 1845-2145
Sept. 9 Tue.
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 12 Mon. 1845-2145
Jan. 13 Tue.

begins again:

Term 3 Apr. 6 Mon. 1845-2145

14.928 DATA BASE CONCEPTS

Prerequisite: Programming or systems design experience or permission of the technology coordinator

This course will expose data processing personnel to the principles involved in the evaluation, selection and implementation of data base management systems.

It will introduce students to the purpose of data base systems, their functions and facilities. On completion of the course, students will be familiar with the various approaches taken to data base software and will know the procedure for installing a data base management system.

Outline: the evaluation of data structures, advantages and disadvantages of data base, a review of existing data base applications and an insight into the various data base management systems on the market. The role of the data base administrator will be developed. A mixture of lecture, discussion and practising techniques will be used.

14.930 MANAGING WORD PROCESSING

This course will provide a foundation and definition of word processing and office systems concepts including the evolution of these techniques, and a study of current applications in this area.

On completion of the course the student can expect to be familiar with the terminology and concepts associated with this technology; understand the role of management and secretarial staff; and understand how to analyze, select, implement and maintain word processing systems.

Outline: defining word processing and office systems, evolution in word processing, dictation equipment evolution, office systems as a functional unit, applications in text editing, word volume surveys and statistical analysis of typing and administrative tasks, work flow case studies, office equipment selection process, introducing word processing and office systems to others, the importance of record keeping, the management role in office systems.

Note: This course is not designed to train operators of word processing equipment.

FINANCIAL MANAGEMENT TECHNOLOGY

Business Certificate in Accounting

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
16.140 Accounting	1.0	16.240 Accounting 2	1.5	14.050 Data Processing –	
10.131 Management in Industry 1	1.0	10.232 Management in Industry 2	1.0	Introduction	1.0
				Elective	1.0
Year 2					
10.135 Economics 1	1.0	10.235 Economics 2	1.5		
16.347 Financial Accounting 1	1.0	16.447 Financial Accounting 2	1.5		
Year 3					
Elective	1.0	Elective	1.0		
and one of:		and one of:			
16.341 Cost Accounting 1	1.0	16.441 Cost Accounting 2	1.5		
16.346 Auditing 1	1.0	16.606 Auditing 2	1.0		
16.912 Taxation 1	1.0	16.913 Taxation 2	1.0		

Business Certificate in Finance

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
16.140 Accounting 1	1.0	16.240 Accounting 2	1.5	14.050 Data Processing –	
10.131 Management in Industry	1.0	10.232 Management in Industry 2	1.0	Introduction	1.0
Year 2					
10.135 Economics 1	1.0	10.235 Economics 2	1.5		
*Elective	1.0	*Elective	1.5		
Year 3					
16.361 Business Finance 1	1.0	16.461 Business Finance 2	1.5		
22.100 Basic Mathematics of Finance	1.0	16.911 Security Analysis	1.0		

*Financial Accounting or Taxation strongly recommended.

Electives and Substitutions

Selections should be approved in advance by writing to a Program Consultant to ensure that they are appropriate and will be accepted as an elective or substitute.

Electives and substitutes may be selected from any course listed in the Financial Management Technology, or such courses as:

		Units
10.221/321	Organizational Behavior 1 and 2	2.0
10.325/425	Labor Relations 1 and 2	2.0
10.360/460	Business Law 1 and 2	2.0
10.902/903	Small Business Management 1 and 2	2.0
10.905	Managerial Styles	1.0
10.908	Problem Solving and Decision Making	1.0
10.924	Management by Objectives	1.0
14.052	Computers in Business	1.0
20.502/602	Oral Communications and Public Speaking 1 and 2	2.0
20.914	General Marketing	1.0
22.100	Basic Mathematics of Finance	1.0
22.901	Purchasing	1.0
22.902	Inventory Planning and Control	1.0
22.935	Statistics for Business and Industry	1.5
22.948	Method Study – Office	1.0
22.952	Systems and Procedures – Manual	1.0
22.954	Project Study – Office	0.5
22.963	Mathematics for Management	1.5
31.910	Business and Technical Correspondence	1.0
31.912	Business Report Writing	1.0

or other courses listed in the Business Management Division selected by the student and approved in writing by a Program Consultant.

Day School Equivalency

Students interested in applying Continuing Education course credits toward day school courses should contact our Program Consultants for further details.

16.140 ACCOUNTING 1

This course will permit individuals with little or no accounting background to become familiar with the techniques required in working through the full accounting cycle. It will provide theoretical and practical training in basic accounting. Persons already employed, or seeking employment in accounting will find this course helpful in broadening their employment possibilities. It also serves as preparation for Accounting 2.

On completion of the course the student can expect to have an understanding of basic accounting functions; to be able to maintain the financial records and prepare the financial statements of any small business; and to have gained an appreciation for the accounting history which sets the foundation for accounting procedures.

Outline: accounting as an information system, introduction to accounting theory, income measurement, traditional record-keeping procedures, the accounting cycle, special journals, cash, investments and receivables.

Term 1 Sept. 8 Mon. 1845-2145 or 1715-2015
Sept. 9 Tue. 1845-2145 or 1715-2015
Sept. 10 Wed. 1845-2145or 1715-2015
Sept. 11 Thur. 1845-2145 or 1715-2015
Sept. 13 Sat. 0900-1200
12 weeks 1.0 Unit

Please indicate a preference of day and time you wish to attend and an alternative.

16.140 ACCOUNTING 1L

This course is designed to permit students to start the basic course in accounting in January. It covers the equivalent of 16.140 Accounting 1 and the first six weeks of 16.240 Accounting 2 for a total of 18 weeks of the 30-week presentation. The balance of the course may be completed in either May or September 1981, (16.240 Accounting 2S). For a description of the course content see 16.140/240.

Term 2 Jan. 12 Mon. 1845-2145
Jan. 13 Tue. 1845-2145
Jan. 14 Wed. 1845-2145
Jan. 15 Thur. 1845-2145
18 weeks 1.5 Units

16.145 CREDIT AND COLLECTION

This course will give the student a thorough understanding of the uses of credit in business today at various levels of the economy; government (a brief study only); financial institutions; manufacturing and construction; wholesaling; retailing; hotel, motel and restaurant credit; consuming.

The course is suitable for the following people: persons contemplating employment in the field who have either limited or no previous experience in credit work; persons whose knowledge of credit is specialized, and who wish to broaden their understanding of the subject; persons in areas such as marketing, accounting, etc., to whom a knowledge of credit would be advantageous now or in the future.

There will be a detailed examination of credit granting and collection techniques and philosophy in all levels of business. On completion of the course a student can expect to assist the credit manager of a larger business in any area of the subject. Naturally, the experience, age, and ability of each student will govern the level of responsibility attained in industry.

Outline: Each evening there will be a lecture and discussion. The discussions will be based on material prepared in advance by each student, based on specified readings from the prescribed text and the previous week's lecture. Topics include determining credit risk; credit instruments and collateral security; types of consumer credit and credit cards; sources of consumer credit information, mercantile credit terms and limits; sources of mercantile credit information; collections; credit and collection letters; credit department management; credit manuals; sales department cooperation, credit history, present and future.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 15 Thur. 1845-2145

16.240 ACCOUNTING 2

Prerequisite: 16.140 Accounting 1 or permission of the financial management coordinator

This course will permit individuals with a basic course in accounting to expand their knowledge of financial and management accounting techniques. It will provide theoretical and practical training in these areas. Persons already employed or seeking employment in accounting will find this course helpful in broadening their employment possibilities. It also serves as a preparation for Financial Accounting 1 and 2 and Cost Accounting 1 and 2.

On completion of the course the student can expect to have gained an appreciation for a number of financial and management accounting techniques; to prepare and interpret detailed financial statements and management reports; and to converse with and understand the requirements of professional accounts.

Outline: A mixture of lectures and laboratories with the undertaking of a practice set will provide for an interesting course. Topics include inventory, long-lived assets, liabilities, forms of business organization, cash-flow analysis, manufacturing accounting, management accounting, income tax, consolidated statements and analysis of financial statements.

Term 2 Jan. 12 Mon. 1845-2145 or 1715-2015
Jan. 13 Tue. 1845-2145 or 1715-2015
Jan. 14 Wed. 1845-2145 or 1715-2015
Jan. 15 Thur. 1845-2145 or 1715-2015
Jan. 17 Sat. 0900-1200
18 weeks 1.5 Units

Please indicate a preference of day and time you wish to attend and an alternative.

16.240 ACCOUNTING 2S

This is the follow up course to 16.140 Accounting 1L and will enable students to complete the last 12 weeks of the basic accounting courses. For a description of course content see 16.240 Accounting 2.

Term 1 Sept. 9 Tue. 1845-2145
Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 3 May 19 Tue. & Thur. 1845-2145
6 weeks (2 nights/week)

16.341 COST ACCOUNTING 1

Prerequisite: 16.240 Accounting 2 or its equivalent or permission of the financial management coordinator if claiming equivalent experience

This course will enable the student with some background in introductory accounting to understand the basic tools that management can use in planning and controlling the activities of an organization. In addition, problems related to inventory valuation and income determination in manufacturing enterprises will be introduced.

The successful student will be able to apply the techniques which he has learned to problem areas in his own particular area of employment. He will also be equipped to move on to Cost Accounting 2 or its equivalent.

Outline: The course will emphasize the role of the management accountant, cost terms and purposes, cost-volume-profit relationships, job order accounting, budgeting, responsibility accounting and standard costs.

Term 1 Sept. 9 Tue. 1845-2145
Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

16.341 COST ACCOUNTING 1L

This course is designed to permit students to start Cost Accounting in January. It covers the equivalent of 16.341 and the first 6 weeks of 16.441 for a total of 18 weeks of the 30-week presentation. The remaining 12 weeks can then be completed either by taking 16.441S over 6 weeks, on a 2 nights per week basis commencing in May, or over 12 weeks commencing in September (16.441 Cost Accounting 2S).

For a description of the course content and prerequisite, see 16.341 and 16.441.

Term 2 Jan. 12 Mon. 1845-2145
18 weeks 1.5 Units

16.346 AUDITING 1

Prerequisite: 16.240 Accounting 2 or equivalent or permission of the financial management coordinator

This course will equip the student with generalized knowledge of auditing principles and specific techniques in analytical auditing and for some asset classifications.

It will give the student an understanding of the meaning and purpose of the audit function, and introduce the student to some techniques and procedures. The successful student will also be equipped to move on to Auditing 2.

Outline: A mixture of lecture and discussions include: history, professional ethics, internal control, auditing EDP systems, gathering evidence, audit work papers.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

16.347 FINANCIAL ACCOUNTING 1

Prerequisite: 16.140 Accounting 1 and 16.240 Accounting 2 or permission of the financial management coordinator if claiming equivalent experience.

The course will provide students who have completed the study of basic accounting with a more advanced course to enrich and broaden their understanding of the accounting process and its underlying theory. Completion of this course and 16.447 will equip them for more responsible employment in the accounting field.

On completion of the course a student will have determined affinity and aptitude for more advanced study of accounting as a career objective and will be prepared to complete the study of intermediate accounting by obtaining the prerequisite for Financial Accounting 2, 16.447.

Outline: A mixture of lecture, discussion and practical work on weekly assignments will cover the main thrust of the course which is the development of financial information for proper presentation on company financial statements for external circulation. The 16.347 segment of the financial accounting course specifically covers a review of the accounting process from a more analytical standpoint, an overall view of the income statement and balance sheet, and a study of cost, valuation, presentation and income measurement problems associated with current assets and current liabilities.

Term 1 Sept. 8 Mon. 1845-2145
Sept. 10 Wed. 1845-2145
Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

16.347 FINANCIAL ACCOUNTING 1L

This course is designed to permit students to start Financial Accounting in January. It covers the equivalent of 16.347 and the first 6 weeks of 16.447 for a total of 18 weeks of the 30-week presentation. The remaining 12 weeks can be completed either by taking 16.447 over six weeks on a 2 nights per week basis commencing in May, or over 12 weeks commencing in September (16.447 Financial Accounting 2S).

For a description of the course and prerequisite wee 16.347 and 16.447.

Term 2 Jan. 13 Tue. 1845-2145
18 weeks 1.5 Unit

16.350 PUBLIC FINANCIAL ADMINISTRATION

This course will familiarize students with the roles, problems and technology of governments in Canada, with emphasis on budgeting and finance.

It will give students an appreciation of the broad ramifications of government action with emphasis on various costs and benefits and acquaint them with techniques of budgeting.

Outline: Techniques used will include lectures, discussions, in-class presentations, selected readings and tests. Material covered will include a macro-economic view of government activities, a comparison of various budget techniques including PBS and MBO auditing, financial markets, portfolio management and trusteeship.

Term 2 Jan. 15 Thur. 1845-2145
12 weeks 1.0 Unit

16.361 BUSINESS FINANCE 1

Prerequisite: A working knowledge of accounting is helpful.

This course will familiarize the individual with little or no background in the field of financial management with the various methods of optimizing the firm's economic position.

It will train the individual in business finance in order that the student, as a member of middle management, may take the best decisions on the financing of the firm.

Outline: The course combines 12 lectures and discussions including control and financial management of the business firm, a study of profit planning, cash and capital budgeting, as well as inventory control.

Term 1 Sept. 9 Tue. 1845-2145
Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

16.441 COST ACCOUNTING 2

Prerequisite: 16.341 Cost Accounting 1 or permission of the financial management coordinator if claiming equivalent experience

This course will enable the student who has learned 16.341 or who has considerable practical cost accounting experience or who has had accounting training through a recognized professional accounting organization to understand accounting techniques which will assist management in planning control, income determination and decision making.

The successful student will be able to apply these diversified management accounting techniques to his own particular area of employment at the management, cost accounting or audit level within the business community.

Outline: The course will emphasize direct costing, relevant costs, cost allocation, capital budgeting, inventory planning and valuation, joint and by-product costs, process costing, payroll, factory ledgers and decentralization, and transfer pricing.

Term 2 Jan. 13 Tue. 1845-2145
Jan. 15 Thur. 1845-2145
18 weeks 1.5 Units

16.441 COST ACCOUNTING 2S

This is the follow-up course to 16.341 Cost Accounting 1L to enable students to complete the last portion of the cost accounting courses.

For a description of the course content and prerequisite see 16.441 Cost Accounting 2.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 3 May 20 Wed. & Mon. 1845-2145
6 weeks (2 nights/week) 1.0 Unit

16.443 MANAGEMENT ACCOUNTING

Prerequisite: 16.904 Accounting for the Manager or 16.140/240 Accounting 1 and 2 or equivalent

This course will enable the student to acquire a knowledge of the nature, scope and uses of managerial accounting as applied to modern business management.

Major emphasis is placed on planning, controlling, performance evaluation and decision making.

Outline: cost-volume-profit analysis; flexible budgeting with an introduction to standard costs for planning and control; variable and absorption costing for product costing purposes; responsibility centers and emphasis on short-term decision making.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 15 Thur. 1845-2145

16.447 FINANCIAL ACCOUNTING 2

Prerequisite: 16.347 Financial Accounting 1 or permission of the financial management coordinator if claiming equivalent experience

For students who have completed the first segment of the study of accounting at the intermediate level, this course provides the opportunity to complete that study. This will provide the necessary background for employment in more responsible accounting positions.

On completion of the course a student can expect to have sufficient accounting knowledge to perform competently in an intermediate level financial accounting position; and have gained exemption (subject to achieving a prescribed mark) from the equivalent course offered by certain professional accounting bodies should the student desire to continue studies towards a professional designation.

Outline: A mixture of lecture, discussion and practical work on weekly assignments will carry on from the point reached in 16.347. Specifically, the course will cover cost, valuation, presentation and, where appropriate, income measurement problems associated with long-term assets and liabilities, and shareholders' equity accounts. Other subjects include income tax allocation, statement of charts in financial position, statements from incomplete data, accounting changes and price-level and fair-value accounting.

Term 2 Jan. 12 Mon. 1845-2145
Jan. 14 Wed. 1845-2145
Jan. 15 Thur. 1845-2145
18 weeks 1.5 Units

16.447 FINANCIAL ACCOUNTING 2S

This is the follow-up course to 16.347 Financial Accounting 1L to enable students to complete the last portion of the financial accounting courses.

For a description of the course content and prerequisite see 16.447 Financial Accounting 2.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 3 May 19 Tue. & Thur. 1845-2145
6 weeks 1.0 Unit

16.461 BUSINESS FINANCE 2

Prerequisite: 16.361 Business Finance 1 is preferable, but not essential.

This course will familiarize the individual with the various methods of obtaining finances for the firm.

It will teach the student how to obtain capital in order to finance the firm.

Outline: The course combines 18 lectures and discussions including: the cost of capital; short, medium and long term financing leasing; refinancing; security analysis. The Canadian capital and money markets and pension portfolios as they affect business decisions of the Canadian firm.

Term 2 Jan. 13 Tue. 1845-2145
Jan. 15 Thur.
18 weeks 1.5 Units

16.606 AUDITING 2

Prerequisite: 16.346 Auditing 1 or equivalent, or permission of the financial management coordinator

Building on Auditing 1, this course will equip the student with specialized skills in all areas of auditing, and deepen the student's knowledge of accounting procedures through critical assessments and by giving opinions of them. This should prove helpful in entering employment in scale fields as public accounting, internal auditing, or management in any business.

On completion of the course the student can expect to have an understanding of general auditing principles, specific audit procedures and be able to critically assess accounting procedures.

Outline: Lectures and discussions on specific areas of auditing including assets, liabilities, owner's equity, revenues, cost, expenses, financial statements, audit reports. A short audit case will be undertaken.

Term 2 Jan. 15 Thur. 1845-2145
12 weeks 1.0 Unit

16.904 ACCOUNTING FOR THE MANAGER

(see 16.443 for a subsequent course)

This course is designed for the manager who wants to understand basic accounting principles without taking a formal introductory accounting course. It will also serve as a refresher for those who have taken an introductory course or for persons who wish to know more about the accounting function as a vocation.

The student completing this course can expect to have a good understanding of the accounting function, the services it can provide to the manager, and how to interpret statements, reports, budgets, etc. in managerial decision making.

Outline: Through lectures and problem solving labs the student is exposed to the accounting cycle, inventory valuation and control, depreciation methods, credit control, budgeting and analysis of financial statements.

Term 1 Sept. 9 Tue. 1845-2145
Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 13 Tue. 1845-2145
Jan. 15 Thur. 1845-2145

begins again:

Term 3 Apr. 7 Tue. 1845-2145
Apr. 9 Thur. 1845-2145

16.911 SECURITY ANALYSIS

This course will permit persons with little or no knowledge of security markets to invest more successfully.

Outline: In a combination of lectures and labs topics include sources of information financial analysis, business cycle analysis, technical analysis, taxation and commodity markets.

Term 2 Jan. 14 Wed. 1845-2145
12 weeks 1.0 Units

16.912 TAXATION 1

Prerequisite: 16.240 Accounting 2 or its equivalent or permission of the financial management coordinator if claiming equivalent experience

This course will provide individuals who have little or no background in income tax to become familiar with the basis of Canadian income tax. The course should be of particular interest to those people who operate their own businesses, have various sources of income, or are planning a career in the accounting field. This course constitutes the first half of the coverage of the field of taxation only.

On completion of the course, the individual can expect to have gained a general understanding of Canadian income tax law as it applies to sources of revenue.

Outline: A mixture of lecture, discussions, assigned readings and technical problems will be used to cover the areas of tax information sources, residency, classes of taxpayers, employment income, business income, investment income, capital cost allowance, and capital gain rules.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Units

begins again:

Term 2 Jan. 12 Mon. 1845-2145

16.913 TAXATION 2

Prerequisite: 16.912 Taxation 1 or permission of the financial management coordinator if claiming equivalent experience

This course will enable students who have completed 16.912 Taxation 1 to continue their study of Canadian income tax.

Upon completion of this course, the individual can expect to have a strong basic knowledge of the subject and be aware of the complexity and problem areas involved in tax planning.

Outline: A mixture of lectures, discussions, assigned readings and technical problems will be used to cover the areas for individuals (including proprietors and partners) corporations and trusts, corporate surplus distributions, international income, appeal procedures, tax planning and tax avoidance versus tax evasion.

Term 2 Jan. 12 Mon. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 3 Apr. 6 Mon. 1845-2145

16.914 FINANCIAL INDEPENDENCE

A course designed to introduce students to a variety of savings and investment aspects to build a sound program to achieve their long term financial goal.

At the conclusion of the course the student should be in a position to follow an investment program tailored to his needs.

Outline: A mixture of lectures and discussions will provide for an interesting course for individuals of all ages. Topics include money management, life insurance, investments and portfolio distribution, home ownership, wills and estates.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 15 Thur. 1845-2145

16.918 PRINCIPLES OF ACCOUNTING (Accelerated)

This is the equivalent of 16.140/240. This course is designed to permit students to take a

full introduction to accounting in 14 weeks.

Prospective students are cautioned against enrolling in this course unless they have a strong background in accounting or are prepared to spend a minimum of 10 hours per week out of class working on the course material.

For a description of the course content, see 16.140 and 16.240.

Term 1 Sept. 9 Tue. 1845-2145
Sept. 10 Wed. 1845-2145
Sept. 11 Thur. 1845-2145
14 weeks 2.0 Units Special Fee $92

begins again:

Term 2 Jan. 13 Tue. 1845-2145
Jan. 14 Wed. 1845-2145
Jan. 15 Thur. 1845-2145

16.926 FINANCIAL ACCOUNTING 1 & 2

This is the equivalent of 16.347/447. This course is designed to permit students to take the equivalent of both financial accounting courses in 15 weeks.

Prospective students are cautioned against enrolling in the course unless they have a reasonable background in financial accounting and are prepared to spend a minimum of 12 hours per week out of class working on the course material.

For a description of the course content and prerequisite, see 16.347 and 16.447.

Term 1 Sept. 8 Mon. & Wed. 1845-2145
15 weeks 2.5 Units

begins again:

Term 2 Jan. 13 Tue. & Thur. 1845-2145

HOSPITALITY AND TOURISM ADMINISTRATION TECHNOLOGY

TRAVEL AGENT COURSES

Business Certificate in Hospitality and Tourism Management – Hotel Option

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
18.103 Front Office Procedures	1.0	16.240 Accounting 2	1.5	Elective	1.0
16.140 Accounting 1	1.0	18.925 NCR 4200 Posting Practicum	0.5		
Year 2					
18.418 Night Audit Procedure	0.5	18.905 Introduction to Food Service Management	1.0	18.901 Bartending – Introduction	1.0
10.904 Supervisory Skills	1.0	18.908 Hospitality Management Accounting	1.0		
Year 3					
18.935 Marketing Concepts	1.0	18.936 Developing an Effective Sales Program	1.0	Elective	1.0
18.912 Financial Management for the Hospitality Industry	1.0	18.902 Property Investment for Accommodation – Restaurants and Pubs	1.0	Elective	0.5

Courses may be taken in any order.

Business Certificate in Hospitality and Tourism Management – Food Option

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
16.140 Accounting 1	1.0	16.240 Accounting 2	1.5	18.901 Bartending – Introduction	1.0
18.905 Introduction to Food Services Management	1.0	18.927 Customer Relations and Communications Skills	1.0		
Year 2					
18.313 Food & Beverage Cost Control	1.0	18.913 Understanding Wines and Spirits	1.0	Elective	1.0
18.909 Restaurant Planning	1.0	18.911 Profitable Restaurant Operation	1.0		
Year 3					
18.908 Hospitality Management Accounting	1.0	18.422 Menu Planning	1.0	Elective	1.0
10.904 Supervisory Skills	1.0	18.902 Property Investment for Accommodation – Restaurant and Pubs	1.0		

Courses may be taken in any order.

Business Certificate in Hospitality and Tourism Management – Travel and Tourism Option

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3*	
Year 1	*Units*		*Units*		*Units*
18.331 Introduction to Tourism	1.0	18.927 Customer Relations and Communications Skills	1.0	18.918 Domestic Air	1.0
18.916 Tours and Hotels	1.0	16.140 Accounting 1	1.0		
Year 2					
10.131 Management in Industry 1	1.0	10.232 Management in Industry 2	1.0	Elective	1.0
18.922 Tourism Geography	1.0	18.917 Rail, Bus & Ship	1.0		
Year 3					
18.919 International Air 1	1.0	18.936 Developing an Effective Sales Program	1.0	Elective	1.0
14.050 Data Processing Introduction	1.0	18.920 Automated Reservations	1.0		

Courses may be taken in any order.

Electives and Substitutions

Selections should be approved in advance, in writing by a Program Consultant to ensure that they are appropriate and will be accepted as an elective or substitute.

Electives and substitutes may be selected from courses listed in the Hospitality and Tourism Administration Technology, or such courses as:

		Units
10.131/232	Management in Industry 1 and 2	2.0
10.135/235	Economics 1 and 2	2.5
10.221	Organizational Behavior 1	1.0
10.321	Organizational Behavior 2	1.0
10.902	Small Business Management 1	1.0
10.903	Small Business Management 2	1.0
10.907	Discussion Leadership	1.0
14.050	Data Processing Introduction	1.0
16.140/240	Accounting 1 and 2	2.5
16.145	Credit and Collections	1.0
20.323	Sales Management	1.0
20.502/602	Oral Communications and Public Speaking 1 and 2	2.0
20.906	Public Relations	1.0
22.100	Basic Mathematics of Finance	1.0
22.948	Method Study – Office	1.0
31.910	Business and Technical Correspondence	1.0
31.912	Business Report Writing	1.0

Day School Equivalency

Students interested in applying Continuing Education course credits toward day school courses should contact our Program Consultants for further details.

18.103 FRONT OFFICE PROCEDURES*

For persons with little or no hotel/motel experience, this course provides theoretical and simulated practical training in most aspects of front office operation. Persons already employed in hotels/motels will find this course helpful in broadening their employment possibilities. It also serves as preparation for courses 18.925 NCR 4200/ 8000 Posting Practicum and 18.418 Night Audit Procedures.

On successful completion of the course a student can expect to be knowledgeable of the specific functions of the front office department in a hotel or motel; be able to perform the duties of a front desk clerk in a hotel or motel (after a brief period of on the job training).

Outline: In a mixture of lectures, discussions, and simulated practice sessions; topics include: who does what in a hotel or motel; personal requirements to be a front desk clerk; reservation systems; credit procedures; dealing with guests, management and fellow employees; effective sales techniques; cash and credit handling; handling emergencies; career opportunities and steps to gain employment as desk clerk, communication skills.

This class is limited to 20 students.

Term 1 Sept. 8 Mon 1825-2145
Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 12 Mon. 1845-2145
Jan. 13 Tue. 1845-2145

begins again:

Term 3 Apr. 6 Mon. 1845-2145

** Has Day School equivalency*

18.313 FOOD AND BEVERAGE COST CONTROL *

This course will allow persons interested in the catering field to gain an understanding of internal control procedures and information systems. The course will deal particularly with the interpretation of data obtained through such procedures/systems to allow for the making of management decisions. Participants should have an aptitude for basic arithmetic calculations.

Students will learn the fundamentals of internal control and information systems for food and beverage operations of all types. Emphasis will be given to the interpretation of information supplied by the control systems in order that meaningful and appropriate decision-making and action can be taken in sufficient time to correct undesirable results or trends.

Outline: The following are the major control points that will be covered: sales, ordering and purchasing, receiving; storeroom and inventory, production (costing). Lectures and problem solving exercises will be used and some take-home assignments will be given.

Term 1 Sept. 9 1845-2145
12 weeks 1.0 Units

** Has Day School equivalency*

18.418 NIGHT AUDIT PROCEDURES

Prerequisite: 18.925 NCR 4200 Posting Practicum or have front desk experience using an NCR 4200 machine plus an aptitude in working with numbers.

This advanced course will prepare persons for work as night audit clerks in the hotel and motel industry.

On successful completion of the course a student can expect to be able to understand and perform standard night audit procedures using an NCR 4200 system. With such training a person would be prepared to enter the hospitality industry as a night auditor.

Outline: The course is problem-oriented. Practical exercises are designed to simulate typical hotel/motel situations. Classes of 5 students allow for close instructor/student contact.

To create a realistic training situation, the course is scheduled as a weekend workshop.

Note: Students receive 15 hours of instruction in this course. All students attend the Friday evening session followed by a full Saturday and Sunday beginning at 0900.

Nov. 14, 15, 16 Fri. 1900-2200
Sat. & Sun. 0900-1600
Feb. 13, 14, 15
Apr. 10, 11, 12
0.5 Unit Special Fee $120

18.422 MENU PLANNING

This course will allow persons with limited experience in the food service industry to gain theoretical and practical experience in the planning and design of menus.

On successful completion of the course a student can expect to be knowledgeable about the factors that influence the make-up of a menu, such as types of market served, price structure, staffing, physical plant, limitations, storage, availability of foods, costing; be able to analyze the above data and compose suitable menus; be able to advise management on layout, colour, print-type, and manufacture of actual menus.

Outline: Lectures and discussions will be used to introduce new material, followed by practical exercises that will allow the students to apply theory to practice. Some take-home assignments will be given.

Term 2 Jan. 15 Thur. 1845-2145
12 weeks 1.0 Unit

18.900 CAREER ORIENTATION FOR THE HOSPITALITY INDUSTRY (formerly The Hospitality Industry – An Introduction)

This course will provide basic information on the following: career opportunities in hotels, motels, food service operations, resorts, and related industries; training opportunities in B.C. (both full-time and part-time) entry requirements into the job market; employment possibilities and advancement.

At the conclusion of the six-evening series participants may expect to be able to describe the job market for the hospitality industry in terms of training, opportunities for entry and advancement; discuss specific job functions and working conditions for hospitality industry positions and prepare a systematic plan for their own career decisions.

Outline: The sessions will be a lively mixture of presentations by BCIT instructors in hospitality administration and guest instructors from the industry. Individual projects and group discussions will add to the information gathering process.

The course is strongly recommended for people with little or no hospitality industry experience and high school students intent on either further training in hospitality and tourism or those interested in entering the industry directly.

Term 1 Sept. 11 Thur. 1845-2145
6 weeks

18.901 BARTENDING – INTRODUCTION (formerly Cocktail Lounge Management)

An introductory session in the fundamentals of bartending for those individuals wishing to work in the restaurant industry or who wish to upgrade themselves in knowledge and expertise in the field of bartending.

Upon completing the session, the student will have a good understanding of the mixing of drinks and their recipes. Coupled with a course in waiter/waitress training or practical experience the student should be capable of working in an operation selling alcoholic beverages.

Outline: The seminar will include: practical experience behind a cocktail lounge bar with emphasis on mixing, glassware, service and knowledge of wines, spirits, beers and liqueurs.

Note: Course will run on demand only. Maximum 12 students.

1.0 Unit Special Fee $110

18.902 PROPERTY INVESTMENT FOR ACCOMMODATION – RESTAURANTS AND PUBS

Course is designed for mature students who intend to begin their own operations, or wish to expand an existing operation. Basic accounting, marketing, real estate, and credit management backgrounds would be an asset to a prospective student. This course would be of interest to persons with entrepreneurial pursuits, owners/managers of present operations and speculators/investors.

On successful completion, the student will expect to have a fundamental knowledge of the following topics: benefits and buy, sell, rent or lease; problems of zoning with regional authorities; site evaluation; site selection, what to look for in buying an existing business; leasing; cashing in on the franchise boom; foreclosure and bankruptcy; putting your business up for sale; analyzing the financial statement; financing the building; interim financing; legal, contractual obligations.

Outline: Content will be presented using lecturers with specialized knowledge, handout materials, current examples, discussions with operators and class participants, practical

assignments. Students will develop their own action kit and check lists.

Term 2 Jan. 14 Wed. 1845-2145
12 weeks 1.0 Unit

18.905 INTRODUCTION TO FOOD SERVICE MANAGEMENT (Supersedes 18.503/603 Food Management 1 and2)

Course is directed towards persons desiring to enter the food service industry with management/ownership as a goal. It is intended to challenge students to consider the many facets and multiple pitfalls of this industry.

Upon successful completion, the student can expect to have a fundamental understanding of basic organization of a food enterprise or department, theory and classification of foods, supplies needed and purveyors available, importance of menu, location, plant layout, cost controls, and setting of objectives, sanitation, and storage principles.

Outline: Lectures, case studies, small group discussions, films and problem solving will be included. Students may be required to complete one or more projects/assignments related to evaluating an existing operation.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 13 Tue. 1845-2145

18.908 HOSPITALITY MANAGEMENT ACCOUNTING

Prerequisite: Completion of 18.313 Food and Beverage Cost Control, may be an asset in taking this course

This course will allow persons with some background in accounting to study principles and procedures of hospitality management accounting. An understanding of general accounting principles is necessary to benefit fully from the course. If you are interested and not too sure about this or other aspects of the outline, contact the technology coordinator prior to registration.

Students will obtain an understanding of departmental income statements, and balance sheets in order to be able to interpret and analyze the results and information shown; and learn the use of management tools such as the break-even technique, budgeting, and investing.

Outline: The course is problem-oriented. Brief lectures will be used to introduce the different concepts, followed by discussion and problem solving exercises. Such exercises will be directly related to present-day hospitality industry accounting.

Term 2 Jan. 12 Mon. 1845-2145
12 weeks 1.0 Unit

18.909 RESTAURANT PLANNING

This course will allow persons to gain theoretical and simulated practical experience in planning a food service operation from the initial concept to the eventual opening. Experience at the operation or supervisory level in the food service industry is required. This course is primarily aimed at persons who expect to be involved in the planning of a new operation or alteration to existing facilities.

On successful completion of the course a participant can expect to understand and be able to initiate a thorough planning procedure for the establishment of a restaurant or similar food service operation.

Outline: The participants will work in groups for assigned in-class projects. Through small classes and close consultation with the instructor, active participation of all participants will be possible and expected. Topics include development of concept; management; location, menu development; staffing; equipment; buildings; layout; financing; promotion and operational planning.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

18.911 PROFITABLE RESTAURANT OPERATION

This course permits persons who are involved in the restaurant business to question and analyze their particular cost problems and solutions. This detailed course is directed at persons who wish to reduce restaurant operating costs.

The success of this course can be determined on a weekly basis as the participant may institute suggestions for cost reduction immediately within his operation and the results can be established quickly.

Outline: Brief lectures on actual proven cost-saving techniques are followed by group discussion and on-site evaluation. Cost areas covered include management, product, service, staff, utilities and advertising.

Term 2 Jan. 13 Tue. 1845-2145
12 weeks 1.0 Unit

18.912 FINANCIAL MANAGEMENT FOR THE HOSPITALITY INDUSTRY

This course will provide students with practical illustrations for financial decision making. This is the senior course in the finance/accounting area that has direct applications to the hotel, food service industry. Students are advised to have previous accounting background or have taken course 18.908 Hospitality Management Accounting before enrolling in this course.

Persons completing this course will be able to decide on and develop financial goals for a company; how to obtain financing to help meet objectives; prepare cash budgets; determine rates of financial return; calculate costs of stock; develop a plan for a feasibility study.

Outline: The course is problem solving in nature, with the instructor available for consultation and assistance (with practical applications). Brief lectures will be used to acquaint students with different concepts, with some class discussions.

18.913 UNDERSTANDING WINES AND SPIRITS

This course will create an understanding of the origins, manufacture, service, compatibility with food and selling aspects of wines and spirits in restaurants. Specific reference will be made to products available in B.C. The course is primarily aimed at personnel in the hotel and food service industry, but would also be of interest to the general public.

At the conclusion of the course a student could expect to be capable of describing the characteristics of popular wines and spirits; describing the growing and manufacturing processes of wines; listing the requirements for storing and handling wines; distinguishing basic types of wine using acceptable tasting procedures; conducting staff training session on the merchandising aspects of wines in restaurants; specify types of spirits and liqueurs.

Outline: Through lectures, film and slide presentations, discussions, field trip, guest presentations, samplings and student projects, the following topics will be covered: the wine growing process, wine making, geographical and grape differences, government regulations, label terminology, storage and selling techniques, serving procedure, staff training.

Note: If demand warranted, a night time course may be run, beginning in October.

18.925 NCR 4200 POSTING PRACTICUM

A weekend seminar designed to give those interested in working at the "front desk" of a hotel or motel, a complete understanding and knowledge of how to operate the NCR 4200 billing machine, as well as an introduction to the latest NCR 8000 model.

Upon successful completion of this seminar the student should be able to handle all procedure and transactions relating to the machines, i.e. posting debits and credits to guest accounts, handling transfers to city ledger, correcting errors, cash reports, etc.

Outline: The seminar content will include lectures, handouts, exercises and practical experience on the latest NCR posting equipment.

Note: The class will be limited to 5 participants. Students receive 10 hours of instruction on a Saturday and Sunday beginning at 0900 each day. It is necessary that students have 18.103 Front Office Procedures or desk clerk experience prior to enrolling in this course.

This course will run on demand on other dates.

Oct. 18 Sat. & Sun. 0900-1600
Mar. 21 Sat. & Sun. 0900-1600
June 13 Sat. & Sun. 0900-1600
2 days 0.5 Unit

18.926 DINING ROOM SERVICE

This course will introduce persons with limited experience in restaurants to the fundamentals, techniques and prerequisite of successfully operating a quality dining room.

On successful completion the course participants will have a clear knowledge and understanding of a first class dining room operation. With some practical experience in the field it may allow them to assume relevant responsibilities at the junior management level and to better understand supervision.

Outline: The course will consist of lectures, lab sessions, demonstrations and discussions entailing such topics as: supervisory responsibilities; hiring of personnel; menu terminology; salesmanship; equipment knowledge; table settings; and arrangements; proper service techniques; staff supervision; staff scheduling and safety.

Term 2 Jan. 17 Sat. 0900-1200
12 weeks 1.0 Unit

18.927 CUSTOMER RELATIONS AND COMMUNICATION SKILLS (formerly Communications Skills in Hospitality Customer Service)

This is a course for those who are in contact with the public or who are seeking this type of employment, eg. travel clerks, ticket agents, restaurant staff, desk clerks and others serving the travelling public. An ideal course for people re-entering the work force in service industries.

Persons successfully completing this course can expect to: speak confidently and clearly to customers, use good telephone techniques, deal effectively with a variety of unusual situations, demonstrate and practice good communication skills (attending, listening, responding) and analyze their personal grooming and professional appearance.

Outline: mini-lecture, demonstration by instructor; practice by students; evaluation; role-playing; student presentations, group discussions and guest speakers.

Term 2 Jan. 14 Wed. 1845-2145
8 evenings plus 2 Sat. 1.0 Unit

begins again:

Term 3 Apr. 8 Wed. 1845-2145
8 evenings plus 2 Sat. 1.0 Unit

18.935 MARKETING CONCEPTS – HOSPITALITY AND TOURISM

This course will introduce students to techniques of marketing. Previous or current involvement in marketing in the Hospitality or Tourism Industry is not essential, though students with some background in the areas, or in accounting, economics or statistics would find that an asset.

The course will engage the student in discovering the involvement of marketing within the hospitality industry.

Outline: marketing theory and how marketing works, principles of marketing, product cycle, the gathering and application of research, interpretation of trends and forecasting and positioning your package for consumer acceptance. Using lectures and case studies students will be expected to propose a full marketing plan.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

18.936 DEVELOPING AN EFFECTIVE SALES PROGRAM – HOSPITALITY AND TOURISM

This course will introduce students to sales promotion.

The students in this course will be expected to understand basic marketing principles and, with guidance, be able to quickly evaluate a case study and develop a realistic sales program strategy.

Outline: This course will be comprised of lectures, some group work, and individual case study assignments. Major topics include: applying marketing objectives in the production of sales material, advertising copy and layout, evaluation of media productions, developing an annual promotional budget, consideration of personal selling and actual practice in making sales calls which will be categorized.

Term 2 Jan. 12 Mon. 1845-2145
12 weeks 1.0 Unit

TRAVEL AGENT COURSES

18.331 INTRODUCTION TO TOURISM

This course provides an introduction to travel and tourism for persons who are newly involved or anticipate employment in the field.

Students will study tourism as a discipline and its function as a national and international industry as well as understand the economics and sociological and environmental aspects of this important and rapidly developing field. On successful completion of this course students should have a good grounding for pursuing further training towards a career in this area.

Outline: Topics will be covered through lectures, films, group discussions and presentations. Course content includes: the components of the tourism industry; impact of tourism on the economy; why people travel; why they prefer certain destinations; travel marketing and the future of the tourism industry.

Term 1 Sept. 8 Mon. 1845-2145
Sept. 9 Tue.
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 12 Mon. 1845-2145
Jan. 13 Tue.

begins again:

Term 3 Apr. 6 Mon. 1845-2145
Apr. 7 Tue.

Please indicate a preference of day you wish to attend.

18.916 TOURS AND HOTELS

Outline: Through lectures, slides, films and sales materials students will: become familiar with terminology related to the sale of tours and land packages; achieve a knowledge of the basic types of tour packages; be aware of geography and trends in travel motivation; develop sales techniques and basic skills in handling reservations, reporting procedures and reference sources.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 14 Wed. 1845-2145

begins again:

Term 3 Apr. 8 Wed. 1845-2145

18.917 RAIL, BUS AND SHIP

Outline: This section of training for travel agents will include lectures, illustrations and materials covering: rail: international and domestic rail transportation, fares and ticketing; bus: domestic and international schedules and fares; steamship: passenger transportation, cruises and freighter travel; other: car rental, travel documents required for trips abroad, travel insurance, preparation of sales reports, etc.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 3 Apr. 8 Wed. 1845-2145

18.918 DOMESTIC AIR

Outline: Working with the Consolidated Passenger Air Tariff and the Official Airline Guide, students will receive training in the fundamentals of domestic (within Canada and the U.S.A.) passenger air travel. The course includes construction of normal and special fares, terminology, schedules, ticketing procedures, etc. related to today's world of travel. Approximately 3-5 hours per week of home study will be required.

Term 1 Sept. 8 Mon. 1845-2145
Sept. 9 Tue. 1845-2145
Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 12 Mon. 1845-2145
Jan. 13 Tue. 1845-2145
Jan. 14 Wed. 1845-2145

begins again:

Term 3 Apr. 6 Mon. 1845-2145
Apr. 7 Tue. 1845-2145
Apr. 8 Wed. 1845-2145

Note: A deposit of $40 will be required on the second night of class in exchange for Tariff and Schedule Books. Twenty dollars of this is refundable upon return of the materials to the course instructor(s).

Please indicate a preference of day you wish to attend and an alternative.

18.919 INTERNATIONAL AIR 1

Prerequisite: Previous direct sales experience in the industry or completion of 18.918 Domestic Air

This course will provide instruction in transatlantic and transpacific passenger rules, regulations and fares. It is designed for persons with previous direct sales experience in the industry or for those who have completed Domestic Air 18.918.

It will familiarize students with the terminology and fundamentals of transatlantic and transpacific fare construction and to have them able, under supervision, to handle all facets of such air travel sales for travel agencies.

Outline: the Air Tariff (passenger) Book 1 general rules; fare construction rules (fare construction units, the mileage system, HIP's backhauls, etc.); special fare rules for fare types which are generally saleable from Canada and/or the U.S.A. Lectures and prescribed itineraries will be used. Approximately 2-6 hours per week of home study will be required.

Ticketing will be limited to discussions of specific ticket entries and students must have a sound knowledge of general ticketing procedure before enrolling in this course.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 12 Mon. 1845-2145
Jan. 14 Wed. 1845-2145

begins again:

Term 3 Apr. 6 Mon, 1845-2145
Apr. 8 Wed. 1845-2145

Note: A deposit of $40 will be required on the FIRST NIGHT of classes in exchange for tariff and schedule books. Twenty dollars of this is refundable upon return of the materials to the course instructor. However, on no account may the tariff materials be retained by the student.

18.920 AUTOMATED RESERVATIONS

This course is designed for persons who have completed the Domestic or International Air courses and/or those who have had at least one year of experience in the air travel industry and are familiar with city codes, terminology, etc. Although not mandatory, basic typing skills will be beneficial. A pre-course booklet will be supplied to each student to provide them with some basic knowledge of the computer system.

Upon successful completion, students will be able to activate a reservations computer terminal, as have been installed in many travel agency offices, and to perform all functions relative to booking airlines reservations, tours, hotels, and/or car rentals.

Outline: This course will consist of "hands-on" training in the use of a CRT terminal. The building, cueing, changing and cancelling of PNR's (Passenger Name Records), automated hotel booking, car rental and tour reservations and the relevant transactions will be explained and practised.

Fees: The fee is payable upon registration, no refunds before the class starts unless a replacement is obtained or the course is cancelled. Exactly 8 students are required. This course is worth 1.0 unit of credit.

Special fee

Note: This course will be offered upon demand only. If you are interested, phone the Continuing Education office at BCIT and leave your name, address and telephone number.

18.921 INTERNATIONAL AIR 2

Prerequisite: Completion of 18.919 International Air 1

This course will provide detailed instruction in passenger rules, regulations and fares on a world-wide basis. This course is designed for persons who have completed 18.919 International Air - 1 and/or for those currently involved and experienced in direct passenger sales.

It will familiarize students with the terminology and fundamentals of fare construction and world-wide currency regulations as related to PTA's (fare and equivalency AMT paid procedures), rerouting (fares, additional collections/refunds).

Outline: The material presented will include the air tariff, lectures and prescribed itineraries, etc. Illustrating fare construction and rerouting examples for fare types which are generally saleable to, from or via Canada. Approximately 3-6 hours per week of home study will be required.

Ticketing and fare construction to/from TC1 will be extremely limited and students must have a sound knowledge in these areas before enrolling in this course.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 13 Tue. 1845-2145

begins again:

Term 3 Apr. 7 Tue. 1845-2145

Note: A deposit of $40 will be required on the FIRST NIGHT of classes in exchange for tariff and schedule books. Twenty dollars of this is refundable upon return of the materials to the course instructor. However, on no account may the tariff materials be retained by the student.

18.922 TOURISM GEOGRAPHY

The course is designed for persons wishing to enter the travel and tourism industry as travel counsellors, travel agents, or ticket agents and for those who are interested in travel destinations.

Students will study the countries of the world where the tourism industry plays a significant part of the economy and develop a good foundation of knowledge of tourism geography.

Outline: The course concentrates on the following areas: geographic location, tourism regions, climate, population, culture, language, natural and man-made touristic resources, currency and transportation. The course will be presented through film, guest speakers, student participation, presentations, and maps. Major tourism destinations to be studied will be selected from: North, Central and South America, Europe, Asia, the South Pacific and the Far East.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 14 Wed. 1845-2145

begins again:

Term 3 Apr. 8 Wed. 1845-2145

18.927 CUSTOMER RELATIONS AND COMMUNICATIONS SKILLS (formerly Communications Skills in Hospitality Customer Service)

This is a course for those who are in contact with the public or who are seeking this type of employment, eg. travel clerks, ticket agents, restaurant staff, desk clerks and others serving the travelling public. An ideal course for people re-entering the work force in service industries.

Persons successfully completing this course can expect to: speak confidently and clearly to customers, use good telephone techniques, deal effectively with a variety of unusual situations, demonstrate and practice good communication skills (attending, listening, responding) and analyze their personal grooming and professional appearance.

Outline: mini-lecture, demonstration by instructor; practice by students; evaluation; role-playing; student presentations, group discussions and guest speakers.

Term 2 Jan. 15 Thur. 1845-2145
8 evenings plus 2 Sat. 1.0 Unit

begins again:

Term 3 Apr. 9 Thur. 1845-2145

The Saturday sessions will be held at the BCIT Burnaby Campus.

18.928 AUTOMATED TICKETING

Prerequisite: It is absolutely mandatory that the student be fully conversant with IATA ticketing procedures (Domestic Air and International Air and/or at least two years in the industry working international itineraries)

This course is designed for persons fully conversant with the operation of reservations computer terminals as have been installed in many travel agency offices, and/or those who have successfully completed the "Automated Reservations" course.

Upon course completion students will be able to activate a ticket printer linked to a reservations computer terminal and to perform all functions relative to producing a computer generated ticket.

Outline: The course will consist of "hands-on" training in producing computer generated tickets, both computer and manually priced. All relevant transactions will be explained and instruction in loading, changing and minor trouble-shooting of a ticket printer will be given.

The course will be held in the downtown area of Vancouver.

The course will be scheduled on demand.

14-16 hours (2 successive weekends)

Special fee

BUILDING SERVICES MANAGEMENT PROGRAM

BCIT in cooperation with the Canadian Building Servicing Association of British Columbia is pleased to present the following certificate program.

Business Certificate in Building Services Management

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
10.904 Supervisory Skills	1.0	10.221 Organizational Behavior 1	1.0	10.321 Organizational Behavior 2	1.0
19.902 Maintenance and Control	1.0	19.905 Safety and Sanitation	1.0		
Year 2					
10.131 Management in Industry 1	1.0	10.232 Management in Industry 2	1.0	Elective	1.0
16.904 Accounting for the Manager	1.0	10.913 Selection Interviewing	1.0		
Year 3					
10.325 Labor Relations 1	1.0	10.425 Labor Relations 2	1.0	Elective	1.0
22.901 Purchasing	1.0	10.907 Discussion Leadership	1.0		

Electives and Substitutions

Electives may be selected in consultation with a Program Consultant from the courses listed in the various technologies that are considered appropriately related, or such courses as:

		Units
10.910	Personnel Management	1.0
10.918	Occupational Safety and Health	1.0
19.903	Interior Design – Basic	1.0
22.902	Inventory Planning and Control	1.0
22.941	Method Study – Office	1.0

19.902 MAINTENANCE AND CONTROL

This course will prepare candidates for a supervisory role in the building management field and assist people in this line of work who have not had formal training.

Students will acquire considerable depth of understanding of maintenance from a supervisory viewpoint and in particular of the chemicals involved in the various types of maintenance.

Outline: lectures, demonstrations, visual aids and viewing equipment will provide knowledge of chemicals, disinfectants, equipment and techniques for maintaining floors, carpets, windows, blinds etc., with particular attention to hotel, hospital and institutional maintenance.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

19.903 INTERIOR DESIGN – BASIC

This course is of value to people who are merchandising home furnishings, architectural students, people in industry, institutions and others with a general interest in the field. Also, recently graduated students seeking a career find it a useful means of evaluating the field as a possible career.

Outline: Through lectures, slides, class projects, assignments, and practical exercises the instructor covers the principal elements of design as they related to the interior environment – balance, emphasis, rhythm, and proportion. It includes how to influence the home through effective colour schemes, lighting arrangements, space planning, form or shape relationship, linear effects, and interesting textural compositions.

Term 1 Sept. 10 Wed 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 14 Wed. 1845-2145

19.905 SAFETY AND SANITATION

This presentation is for hospital executive housekeepers, maintenance employees plus hotel and residence building managers, or anyone aiming at achieving such a position.

The student will acquire a sound understanding of the causative factors of diseases and the methods available to control their incidence. The student will also be able to identify and evaluate biological, physical and chemical safety hazards and their potential dangers. Established methods will be utilized so that adequate controls can be used for protection and prevention.

Outline: Presentations will be made from a composite of lectures, visual aids, demonstrations, and discussion sessions. Specific topics that will be covered are: sanitation – terminology, related bacteriology, behavior control via physical and chemical agents, cleaning techniques, waste material handling, insect and rodent control, plumbing, and case studies. Safety – ergonomics, chemical hazards, ventilation, protective equipment, dangerous liquids, tools and machinery, accident prevention, safety training, radioactive materials, disaster planning, evacuation, and case studies.

Term 2 Jan. 12 Mon. 1845-2145
12 weeks 1.0 Unit

MARKETING MANAGEMENT TECHNOLOGY

Business Certificate in Marketing

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With the approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
20.180 Marketing 1	1.0	20.280 Marketing 2	1.5	16.904 Accounting for the Manager	1.0
10.131 Management in Industry 1	1.0	10.232 Management in Industry 2	1.0		
Year 2					
31.912 Business Report Writing	1.0	20.389 Marketing and Customer		Elective	1.0
20.275 Salesmanship 1	1.0	Behavior	1.0		
		20.387 Marketing Planning	1.0		
Year 3					
20.502 Oral Communication &		20.903 Marketing Research	1.0		
Public Speaking 1	1.0	Elective	1.5		
20.323 Sales Management	1.0				

Business Certificate in Technical Sales Representative

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
20.180 Marketing 1	1.0	20.280 Marketing 2	1.5	Elective	1.0
10.131 Management in Industry 1	1.0	10.232 Management in Industry 2	1.0		
Year 2					
20.275 Salesmanship 1	1.0	20.389 Marketing and Customer		Elective	1.0
*Technical Elective if required	1.0	Behavior	1.0		
		*Technical Elective if required	1.5		
Year 3					
31.910 Business and Technical		31.912 Business Report Writing	1.0		
Correspondence	1.0	20.387 Marketing Planning	1.0		
20.502 Oral Communications and					
Public Speaking 1	1.0				

*Students may select the technical electives from any approved course taken from the engineering section.

See page 62 for the list of electives and substitute courses.

Business Certificate in Advertising and Public Relations

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
20.180 Marketing 1	1.0	20.280 Marketing 2	1.5	12.905 Copywriting – Radio & TV	1.0
20.371 Advertising 1	1.0	20.471 Advertising 2	1.0	10.131 Management in Industry 1	1.0
Year 2					
20.906 Public Relations	1.0	20.930 Advertising Creative Print	1.0		
10.232 Management in Industry 2	1.0	Elective	1.5		
Year 3					
16.904 Accounting for the Manager	1.0	20.389 Marketing and Customer Behavior	1.0		
20.502 Oral Communications and Public Speaking 1	1.0	20.602 Oral Communications and Public Speaking 2	1.0		

Business Certificate in Retail Merchandising

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
20.180 Marketing 1	1.0	20.280 Marketing 2	1.5	Elective	1.0
10.131 Management in Industry 1	1.0	10.232 Management in Industry 2	1.0		
Year 2					
20.384 Retailing	1.0	20.411 Merchandising	1.5	Elective	1.0
20.371 Advertising 1	1.0	20.471 Advertising 2	1.0		
Year 3					
20.275 Salesmanship 1	1.0	Elective	1.0		
20.903 Marketing Research	1.0	20.389 Marketing and Customer Behavior	1.0		

See page 62 for the list of electives and substitute courses.

Business Certificate in Transportation and Distribution

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
20.434 Transportation Regulation 1	1.0	20.444 Transportation Regulation 2	1.5	20.442 Marketing International	1.0
20.432 Transportation Economics	1.0	20.435 Distribution Management	1.5		
Year 2					
20.333International Documentation Importing	1.0	20.441 International DocumentationExporting	1.0	16.904 Accounting for the Manager	1.0
20.914 General Marketing	1.0	20.901 Purchasing	1.0		
Year 3					
10.131 Management in Industry 1	1.0	10.232 Management in Industry 2	1.0		
10.135 Economics 1	1.0	10.235 Economics 2	1.5		

Business Certificate in Real Estate

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
20.180 Marketing 1	1.0	20.280 Marketing 2	1.5	20.275 Salesmanship 1	1.0
10.131 Management in Industry 1	1.0	10.232 Management in Industry 2	1.0		
Year 1					
20.351 Principles of Property Management	1.0	20.323 Sales Management	1.0	Elective	1.0
20.452 Appraising Real Property SREA – Introduction	1.5	20.454 Real Estate Investment Analysis	1.0		
Year 3					
20.371 Advertising 1	1.0	16.904 Accounting for the Manager	1.0		
20.502 Oral Communication and Public Speaking 1	1.0	20.602 Oral Communication and Public Speaking 2	1.0		

Special Electives: Successful completion of BCIT's day school course 20.350/450 Real Estate Management or the University of British Columbia's Salesman's Pre-licencing course will qualify for 2.5 units of transfer credit towards this certificate program.

Electives and Substitutions

Selections should be approved in advance, in writing by a Program Consultant to ensure that they are appropriate and will be accepted as an elective or substitute.

Electives and substitutes may be selected from courses listed in the Marketing Management Technology when approved as above, or such courses as:

		Units
10.135/235	Economics 1 and 2	2.5
10.221/321	Organizational Behavior 1 and 2 (formerly Management Psychology 1 and 2	2.0
10.325/425	Labor Relations 1 and 2	2.0
10.360/460	Business Law 1 and 2	2.0
10.907	Discussion Leadership	1.0
10.924	Management by Objectives	1.0
14.050	Data Processing – Introduction	1.0
16.140/240	Accounting 1 and 2	2.5
16.145	Credit and Collections	1.0
16.904	Accounting for the Manager	1.0
22.100	Basic Mathematics of Finance	1.0
22.901	Purchasing	1.0
22.902	Inventory Planning and Control	1.0
22.903	Operations Planning	1.5
22.935	Statistics for Business and Industry (supersedes 22.535/635	1.5
22.941	Method Study – Manufacturing	1.0
22.943	Performances Measurement	1.0
22.944	Project Study – Manufacturing	0.5
22.946	Facility Layout and Materiel Handling – Manufacturing	1.0
22.947	Facility Layout and Materiel Handling – Office	1.0
22.948	Method Study – Office	1.0
22.952	Systems and Procedures – Manual	1.0
22.954	Project Study – Office	0.5
22.963	Mathematics for Management	1.5
31.910	Business and Technical Correspondence	1.0
31.912	Business Report Writing	1.0
31.914	Technical Report Writing	1.0

or courses listed in the Business Management Division, selected by the student, and approved in writing by a Program Consultant.

Day School Equivalency

Students interested in applying Continuing Education course credits toward day school courses should ontact our Program Consultants for further details.

20.180 MARKETING 1

This course will provide students with little or no experience in marketing or sales responsibility jobs, with a basic understanding of the role and activities carried out by marketing personnel in business organizations.

The course will convey skills in assessing market demand for consumer and industrial goods, and apply principles of product planning price determination, sales and promotion programs to capitalize on well defined market opportunities.

Outline: The course will comprise a blend of studies using a comprehensive textbook; lectures designed to expand and illustrate applications; case studies and discussion for developing decision making skills; and project assignment to bring acquired knowledge into a practical situation. Specific topics covered include market analysis, target market determination, research methods, forecasting, and marketing program design and control

Term 1 Sept. 8 Mon. 1845-2145
Sept. 9 Tue. 1845-2145
Sept. 11 Thur. 1845-2145
Sept. 13 Sat. 0900-1200
12 weeks 1.0 Unit
begins again:
Term 2 Jan. 13 Tue. 1845-2145
Jan. 15 Thur. 1845-2145

20.275 SALESMANSHIP 1

This course provides basic training for the sales aspirant and gives those already in the sales field who have had no formal training an understanding of the mechanics of salesmanship. It is also suitable for those who are employed in an "inside sales position" and who wish to move up into the sales representative category.

To provide the trainee with sufficient knowledge and skills to seek a career in the sales field. For those already in sales and who have had no formal training an opportunity to make an in-depth study of mechanics of salesmanship and develop their skills to a professional level.

Outline: Through a series of lectures, reading assignments, and the use of training film the student covers the pre-approach, demonstration/presentation, handling of objections and closing techniques.

Students will develop selling skills through practical application of the various sales techniques to a product or service of their choice. Sales practice (role playing) with the use of video tape and discussion is of great assistance.

Term 1 Sept. 10 Wed. 1845-2145
Sept. 11 Thur. 1845-2145
Sept. 13 Sat. 0900-1200
12 weeks 1.0 Unit
begins again:
Term 2 Jan. 14 Wed. 1845-2145
Jan. 15 Thur. 1845-2145
Jan. 17 Sat. 0900-1200
begins again:
Term 3 Apr. 8 Wed. 1845-2145

20.280 MARKETING 2

Prerequisite: 20.180 Marketing 1

This course is a continuation of 20.180 Marketing 1.

The student will learn the elements of the marketing mix – product, price, promotion and distribution. The course will also briefly introduce to the student some of the other areas of marketing such as industrial marketing, international marketing and marketing of services.

The secondary objective is to further expose the student to the decision making process.

Outline: A continuation of the approaches taken in 20.180 Marketing 1.

Term 2 Jan. 12 Mon. 1845-2145
Jan. 13 Tue. 1845-2145
Jan. 15 Thur. 1845-2145
Jan. 17 Sat. 0900-1200
18 weeks 1.5 Units
begins again:
Term 3 Apr. 7 Tue. & Thur. 1845-2145
9 weeks (2 nights/week)

20.323 SALES MANAGEMENT

This course will provide students with a basic overview of the sales management process as well as a close examination of selected topics such as: selection, assimilation, training, supervision and performance appraisal techniques. The course content emphasizes the human resources. Supplementary topics include: sales morale, motivation, planning, organization and sales management problems. Students should be able to demonstrate the basic "sales management skills" upon completion.

Outline: lectures, discussion, case studies, films and reading.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit
begins again:
Term 2 Jan. 14 Wed. 1845-2145

20.333 INTERNATIONAL DOCUMENTATION IMPORTING

The presentation is aimed at those in industry interested in the facets, functions and documentation of importing.

Students will learn to handle details of import procedures; to understand just what happens to shipments and the paperwork concerning the goods, costing, financing, insurance, transportation, documentation and customs clearance. The course content will be geared to the needs and interests of the attending students. Class discussions will be encouraged.

The practical approach is emphasized. The intent of this course is to assist those in industry to understand the complexities of international trade, the terminology of international trade, and the activities involved within international trade on the local and foreign scenes, especially as it affects the importer in Canada.

Outline: customs history, Customs Act, Customs Tariff Act, countervailing duty, countries and their tariff status, marking and labelling, import pricing, importers and their requirements for customs, an introduction to customs valuation, customs brokers and their relationship to importers, tariff classification, customs invoices, customs import entries, temporary importations, collector's permission, Import Surveillance Program, import permits, federal sales and excise taxes, bonded warehouse, refund claims, federal sales and excise tax claims.

Note: A combination of 20.333 International Documentation Importing and 20.441 International Documentation Exporting equals the course given as International Trade in day school.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit
begins again:
Term 2 Jan. 15 Thur. 1845-2145

20.351 PRINCIPLES OF PROPERTY MANAGEMENT

This course lays the foundation for a sound education in property management. It thoroughly familiarizes the student with the basic theories and techniques of managing investment real estate and is a wise investment for any person interested in property management.

On successful completion of the course, the student will have an insight into the long range welfare of the investment property and be familiar with the day-to-day skills necessary to manage residential properties. Students can obtain credit points for this course toward the designation of certified property manager with the Institute of Real Estate Management.

Outline: The course will discuss all responsibilities of the property manager such as management agreements, merchandising rental space and leasing, controlling the physical investment and maintenance, real estate economics, property taxation and appeal procedures, financing and valuation, neighborhood analysis, property analysis and apartment management. Students will gain an overall view of the many types of property in which management opportunities abound. A textbook will be used with assigned reading.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

20.371 ADVERTISING 1

This course is carefully designed to help creatively inclined persons assess their potential and abilities for careers in the advertising field; to assist newcomers to advertising in expanding their knowledge of the craft and exposing them to the newest trends and up-to-date changes taking place in advertising.

On successful completion of Advertising 1 a student will be able to be a competent critic of advertising; to measure his or her own abilities and talents in one of the phases of advertising; to have a deeper understanding of advertising in the marketing picture; to understand better the problems and challenges of advertising; to

get valuable insights into the factors affecting creative endeavours; and to make a more effective contribution if involved in an advertising career.

Outline: history of advertising – the field today and tomorrow; definitions of local and national advertising; the advertising spiral advertising planning; the media and media mix – newspapers, radio, TV, magazines, direct mail and transit. There will be classroom projects and field visits.

Term 1 Sept. 9 Tue. 1845-2145
Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 15 Thur. 1845-2145

20.384 RETAILING

This course is for students who are relatively new in the retail field and who wish to prepare themselves for advancement, or for students seeking a career in retail merchandising who have completed the course Marketing 20.180/280.

On successful completion of this course students should have an understanding of sound retailing management principles and the strategies of retailing in a competitve environment.

Outline: Both small-scale and large-scale retailing will be dealt with in covering such areas as: principles of retail location and store layout; trading area analysis; principles of retail gravitation; retail strategies and trends; shrinkage problems; productivity, sales promotion and consumerism.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

20.387 MARKETING PLANNING

Prerequisite: 20.180/280 Marketing 1 and 2 or equivalent

Students must have some marketing background through experience or training and the course Management in Industry and Management by Objectives taken prior will be helpful

This course is for people who can benefit from understanding the highly important principles and techniques of planning in a marketing situation.

It will provide students with an understanding of the need for planning in both strategic and operational time frames and to see the benefits of an organized approach to marketing a product or service.

Outline: A combination of class lectures, discussions, case studies and a term project will be used to provide a comprehensive range of knowledge in this important marketing area. Specific topics covered include: analyzing and reaching present and potential markets, improving various aspects of the product mix, applying marketing research methods and techniques, determining marketing objectives, and utilizing advertising, promotion, distribution, and price strategies.

Term 2 Jan. 13 Tue. 1845-2145
12 weeks 1.0 Unit

20.389 MARKETING AND CUSTOMER BEHAVIOR

Prerequisite: 20.180/280 Marketing 1 and 2, or equivalent

This course is designed to broaden the student's understanding of the "people aspects" in marketing and to introduce the various research findings which relate to customer behavior. Whether new to the marketing field, planning to enter it, or an "old hand", all will benefit from a better understanding of the ever-important customer.

On successful completion of this course the student can expect to be knowledgeable about the characteristics of various consumer public and simple demographic variables such as age, sex and socioeconomic level; be able to understand how and why consumers act individually and in mass; be able to understand purchase and postpurchase behavior; understand the behavior of people as buyers and users of goods and services; and be able to understand the "product image" and "product personality" and the progress and changes being made toward a discipline of customer behavior.

Outline: In a mixture of lectures, discussions, seminars, projects and assignments topics include: the importance of customer behavior, problems relating to customer behavior, mass communications, foundations of customer behavior, consumer economic theory, contributions of the behavioral sciences and customer behavior present and future.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

20.411 MERCHANDISING

This course will help those with limited experience in retailing gain an understanding of basic concepts and practices in merchandising. Specifically, this course will deal with the techniques of establishing, procuring, maintaining, evaluating, and promoting a merchandise assortment.

On successful completion of this course a student can expect to be conversant with assortment planning, factors in selection of resources, buying plans, characteristics of fashion and staple operations, fundamentals of budgets, standards, assortment maintenance selection techniques, vendor relations, merchandise presentation, and basics of sales promotion. With such training the student would be in a position to seek advancement in specialty retail and department store employment.

Term 2 Jan. 12 Mon. 1845-2145
18 weeks 1.5 Units

20.432 TRANSPORTATION ECONOMICS

Students will be provided with an understanding the various procedures used to cost transportation.

Each mode of transportation will be analyzed to show the specific importance of economics in relation to the movement of goods and people.

Many outside factors must be considered by the transport operator and not just the costs that can be controlled by them. Many points of interest to both public and private carriers will be included in the course.

The material will also be of interest to the user of the transport service as it will give them an understanding of the many facets of transport costing.

Outline: the need for accurate costing in transportation; economic considerations that directly or indirectly effect costing patterns of transport modes; geographic considerations that directly or indirectly effect costing patterns of transport modes; a concept approach to costing transportation; practical examples of transport costing (ship, airline, pipeline, highway, railroad, transport terminals); the relationship of freight and passenger rates to costs; economic aspects of transport development; cost-benefit analysis and its use in transport costing; marginal cost pricing and its use in transport costing; the significance of the operating department in the transport cost.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

20.434 TRANSPORTATION REGULATION 1

This course is designed to assist those people who will have or who now have employment in traffic departments, distribution departments, shipping and the transportation industry itself to understand the complexities of transportation in Canada and the international transport regulation that affects Canadian trade.

This course will relate to transportation law and its application regarding B.C. first; Canada second; the Pacific Rim trading community third; and world trade fourth.

The students will study the various relations and their application to the carriage of goods and people as a service and how it affects the user of the service. The duties, liabilities and responsibilities of the carrier and the shipper will be outlined. The primary purpose is to relate how transportation regulation has a bearing on the economics of a firm, and the relationship to a firm's printing policy and service.

Outline: a definition of economic regulation; the reasoning for economic regulation; contracts of carriage, viz; rail and truck bills of lading through bills of lading, operating authorities, ocean bills of lading, contracts of affreightment, charter party agreements; carrier liability; embargoes; shipper liability.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

20.435 DISTRIBUTION MANAGEMENT

The course is designed for the business student to provide an introduction to the function of physical distribution.

Specifically the student should gain a perspective of the role and contribution that the functions of distribution provide in the total marketing picture; understand how the distribution function operates within the organization; gain an appreciation and understanding of the cost factors that sales supporting functions contribute to the total economic structure; become a better informed business decision maker.

Outline: An overview of what is generally considered "The Total Distribution Concept" will form the core of the course. The emphasis will be on the factors that make up the elements of distribution – transportation; material handling; warehousing; purchasing; packaging; customer service and inventory management.

There will also be a section dealing with distribution economics to include such factors as distribution and production costs; inventory control, budgeting and distribution administration.

A third section of the course will discuss the relationship of distribution to marketing and also cover the various channels of distribution.

Term 2 Jan. 12 Mon. 1845-2145
18 weeks 1.5 Units

20.441 INTERNATIONAL DOCUMENTATION EXPORTING

The presentation is aimed at those in industry who are involved in or are interested in the facets, functions and documentation of exporting.

Students will learn to handle details of export procedures; to understand just what happens to shipments and the paperwork concerning the goods, costing, financing, insurance, transportation, documentation, and many other details. The course content will be geared to the needs and interests of the attending students. Class discussions will be encouraged.

The practical approach is emphasized. The intent of this course is to assist those in industry to understand the complexities of international trade, the terminology of international trade, and the activities involved within international trade on the local and foreign scenes, especially as it affects the exporter in Canada.

Outline: why export?, foreign trade analysis, export pricing, export documents, export permits, export sales order contract, government agencies to assist the exporter, duty drawbacks, banking and export financing, the Brussels Nomenclature, Carnet and trade facts, free trade zones and trade terminology.

Note: A combination of International Documentation Importing and International Documentation Exporting equals the course given as International Trade in day school. (Students do not require 20.333 International Documentation Importing in order to take 20.441 International Documentation Exporting.)

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 14 Wed. 1845-2145

20.442 MARKETING INTERNATIONAL

The course will be of interest to those who are involved (or want to be) in export marketing. This course will illustrate how to locate an export market, how to go about selecting a distributor, how to calculate export prices, etc.

It will give a general understanding of international marketing dimensions from a management point of view and illustrate the sources and methods in international marketing research.

Outline: The international marketing environment will be examined considering Canada as a major world trader. Areas of study will include: international marketing research; organization for exports; pricing; social, cultural and political problems; and other related topics.

Term 3 Apr. 6 Mon. 1845-2145
12 weeks 1.0 Unit

20.444 TRANSPORTATION REGULATION 2

Prerequisite: Transportation Regulation 1

This is a continuation of Transportation Regulation 1.

The course will provide material that is necessary for both the buyer and the seller of transportation. This course involves the factors that are required for a comprehensive practical knowledge of transportation.

The students will be introduced to the various types of freight tariffs, how to overcome problem areas of freight claims, and introduction to marine insurance, the various agencies involved in transport regulation, and the trend to de-regulate in the United States and the implications to Canadian shippers and receivers.

Outline: freight tariffs (how to use a freight tariff, types of tariffs, important tariff provisions, special services and ancillary services tariffs, routing and misrouting); freight claims (loss and damage, undercharge, overcharge, subrogation, misrouting, reparation); the economic regulation of transport; making proposals to regulatory bodies; national policies and economic regulation; international agencies and economic regulation; and the trend to de-regulate transport in the United States etc.

Term 2 Jan. 13 Tue. 1845-2145
18 weeks 1.5 Units

20.452 APPRAISING REAL PROPERTY – SREA – INTRODUCTION

The course is designed for beginners in the fields of appraiser, real estate broker, lender, builder, and assessor. It assumes no particular background for the student other than an interest in appraising and ability to learn. It may also serve as a refresher for experienced appraisers who feel a need to refresh and update their knowledge and skills.

On completing this introductory course, the student will not be an appraiser, but will have learned how to apply the principles and techniques to actual residential appraisal problems. To become a professional appraiser, the student completing this course must add meaningful practical appraisal experience and further advanced training. This course is recognized for credit on most formal appraisal programs.

Outline: Through lectures, discussion groups, reading assignments, and practical case problems, the material covered will include such topics as principles of real estate, elements of urban land economics, nature and principles of real estate value, appraising as applied

economics, analysis, the appraisal framework, area analysis, neighborhood analysis, site analysis, site valuation, improvements analysis, direct sales comparison approach, gross rent multiplier analysis. Cost approach; reproduction cost of new improvements, estimation of accrued depreciation (diminished utility). Summary of the cost approach: cost approach reconciliation analysis and final value estimate; writing the appraisal report; professional ethics and standards of practice.

Note: There will be an orientation session for all students enrolled in this course on Saturday, November 1 at 0900.

Term 1 Nov. 15 Sat. 0900-1600
9 weeks 1.5 Units Special Fee $132

20.454 REAL ESTATE INVESTMENT ANALYSIS

Students will learn the process of real estate investment analysis and how to apply the techniques in the market place. This course will be valuable for the real estate practitioner, those contemplating industrial and commercial developments, and private investors wanting to improve the decision making process.

Students completing this course will be able to define and understand each stage in the analysis process; to master the mathematical techniques used to measure rewards and to be able to critically appraise their usefulness.

Outline: Through lectures, examples, case studies and assignments, students will study types of problems, investor objectives, sources of value of income producing properties, tools of analysis, industry rules of thumb and cash flow analysis. Analysis will be completed with the aid of computer programming.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

20.471 ADVERTISING 2

Prerequisite: Advertising 1

This course will put into sharp focus the subject material covered in Advertising 1; enable persons holding advertising positions to advance to more responsible areas; show the inter-relationship between marketing and advertising.

On successful completion of this course the student should expect to: possess a fair grounding in aspects of measuring advertising effectiveness; differentiate between advertising and sales promotion; understand media planning and budgets; know the make-up of advertising campaigns; know how an advertising agency operates; implement marketing planning; coordination, controls, and measurements and take on greater responsibilities in an advertising operation.

Outline: A blend of active learning lectures; assignments, competitive team projects (backed up by analysis and performance critiques) provides a unique learning experience in advertising and marketing planning. Media, sales promotion, radio and TV writing, film productions, creative processes, the principles and practices of marketing planning, coordination, controls and measurements are included.

Term 2 Jan. '13 Tue. 1845-2145
Jan. 15 Thur. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 3 Apr. 9 Thur. 1845-2145

20.502/602 ORAL COMMUNICATION AND PUBLIC SPEAKING 1 AND 2

These courses will improve oral communications in business and social situations. Those people who lack self confidence generally and who specifically lack confidence in communication situations should find this course very profitable. Class instructor is flexible enough to allow for individuality in the class. Each student will develop increased skill and confidence in all speaking situations.

Outline: Various types of communications situations are examined; conversation, social and business speaking, communication breakdown, and how to avoid it. Films, buzz groups, along with use of closed-circuit TV will be utilized. Most nights each student will make some sort of PUBLIC PRESENTATION.

20.502 Part 1

Term 1 Sept. 9 Tue. 1845-2145
Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 12 Mon. 1845-2145

20.602 Part 2

Term 2 Jan. 13 Tue. 1845-2145
Jan. 14 Wed. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 3 Apr. 6 Mon. 1845-2145

20.903 MARKETING RESEARCH

This is a fundamental course designed to assist persons who are or will be involved in the marketing research function or its application, to understand better the theoretical and operational aspects of this important area of marketing.

It will provide interested persons with the knowledge and ability to apply basic marketing research methods and techniques to a wide variety of marketing problems.

Outline: A combination of class lectures, discussions, case studies and a field project will be used to provide a comprehensive knowledge of this integral marketing function. Specific topics are sampling theory and practice, questionnaire design and field interviewing, consumer behavior, media, advertising, product, and industrial marketing research.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

20.906 PUBLIC RELATIONS

This course is designed for people in business, government, municipalities, associations, and organizations who have a responsibility for communicating with the public and within the organization.

Students completing this course will be able to carry out their information and communication assignments with increased confidence and competence.

Outline: Through lectures, examples, case studies, and discussion sessions the course material covers planning and executing a public relations program, communication techniques, principles of news writing, and preparation of news photographs, utilizing the various media, press and community relations, external and internal communications and meetings.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 15 Thur. 1845-2145

begins again:

Term 3 Apr. 9 Thur. 1845-2145

20.907 SALESMANSHIP 2 (formerly Salesmanship – Salesman)

This course is designed for men and women who are already employed in sales. It is also suitable for those employed in an "inside sales position" who wish to move up into the sales representative category.

It will give those persons already in the sales field an opportunity to develop further, their sales skills and eliminate the costly "trial and error" method of learning.

Outline: A study of the mechanics of salesmanship covering the pre-approach, approach, demonstration, objection-handling, and closing techniques. Emphasis will be placed on selling practice and role playing using video tape. A number of sales training films are employed.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 12 Mon. 1845-2145

begins again:

Term 3 Apr. 6 Mon. 1845-2145

20.914 GENERAL MARKETING

This is an introductory course in marketing for persons who wish to have a short 12-week course rather than the longer combined marketing course. It will be useful to persons concentrating their studies in areas other than marketing who wish limited exposure to the field of marketing.

The students will be given many concepts in the general field of marketing and asked to relate these to their own business situation. Hopefully this will provide students with a conceptual framework of marketing in their own firm as well as a theoretical understanding of the discipline.

Outline: market analysis, market concept, uncontrollable factors, total product, market segmentation, product differentiation, packaging, branding, product classification for consumer and industrial goods, product life cycle, style and fashion, place utility objectives and channels of distribution, retailing, wholesaling, promotion blending, pricing policies. Students will be expected to answer questions on examination on the readings from the textbook as assigned and to prepare out-of-class assignments relating to their own company or some business situation in various topics of the course.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 14 Wed. 1845-2145

20.915 INTRODUCTION TO TRANSPORTATION

An introduction to transportation for students following another career path who will benefit from a sound, general knowledge of the field; people interested in transportation as a career who could use this general knowledge as a guide to determine which part of the industry best suits their interests; and to potential users of transportation to show how transportation can be used to support the production, sales and marketing efforts of their organizations.

This course will deal with the elements of traffic and transportation and will be introductory rather than technical in its presentation. It may also be used as a refresher course for those already involved in traffic and transportation management. The course is intended to develop the individual's knowledge of transportation from both the buyer's and seller's point of view.

Outline: selection of carriers; quantity transportation purchases; quality transportation purchases; differing service features of transportation modes; legal and illegal shipments; the distribution centre and its effect on transportation; private carriage and freight claims; containerization; household goods; and unit load handling.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

20.930 ADVERTISING CREATIVE PRINT

Suggested Prerequisite: Advertising 1 or practical experience in the field of advertising, public relations or publishing

This course will teach students who have a basic knowledge of advertising and print media planning, the creative development of graphic art concepts and printed publications.

On successful completion of this course students will have a thorough, practical knowledge of design, layout, typography, printing and their applications to both advertising and general publishing. They will understand the fundamentals of effective copywriting and the criteria used to determine effective design. They will be familiar with those production processes necessary for transforming rough art concepts into the published form.

Outline: Topics including design, layout, typography, color, printing and publication planning will be covered through a combination of lectures, demonstrations, workshops and field trips. Attention will be focused on the role of graphic design houses, printers, photographers and commercial artists.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

20.980 PUBLIC SPEAKING 3 – ADVANCED

This course will provide a forum for students who have successfully completed Oral Communications and Public Speaking 1 and 2 and advance their public speaking skills.

A more comprehensive study is made of the principles of speech making including techniques of explanation, amplification, structure, organization and sequence in public deliberation. Particular emphasis is placed on the dynamics of persuasion, the use of reasoning, evidence and motives.

Outline: Lecture, discussion, example are methods used. Closed circuit TV is used as an evaluative tool. Emphasis is on class involvement, particularly the skills of critical listening and evaluation.

Term 3 Apr. 7 Tue. 1845-2145
12 weeks 1.0 Unit

OPERATIONS MANAGEMENT TECHNOLOGY

Business Certificate in Operations Management – Office Systems

This program is designed for people who are directly involved in office areas of manufacturing or warehousing function. Its emphasis is in the quantitative approach to office management.

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

Septembe (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
22.948 Method Study – Office	1.0	22.952 Systems Procedures Manual	1.0	22.954 Project Study Office	0.5
14.050 Data Processing – Introduction	1.0	22.902 Inventory Planning & Control	1.0		
Year 2					
22.100 Basic Mathematics of Finance	1.0	22.935 Statistics for Business and Industry	1.5	Elective A	1.0
22.947 Facility Layout and Materiel Handling – Office	1.0	16.904 Accounting for Manager	1.0		
Year 3					
22.956 Management Information Systems	1.0	22.953 Project Planning & Scheduling	1.0	10.904 Supervisory Skills	1.0
Elective B	1.0 or 1.5	10.221 Organizational Behavior 1 or 10.325 Labor Relations 1	1.0 1.0		

Note: Elective A – Computer Systems
– Computer Language

Elective B – Mathematics for Management
– Marketing Course
– Any other course relevant to student's industry

Business Certificate in Operations Management – Manufacturing

This program is designed for people who are directly involved in the manufacturing or warehousing function. Its emphasis is in the quantitative approach to management and its subjects are designed to give an analytical approach.

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*(Units)*		*Units*		*Units*
22.941 Method Study – Manufacturing	1.0	22.943 Performance Measurement	1.0	22.944 Project Study – Manufacturing	0.5
14.050 Data Processing Introduction	1.0	22.902 Inventory Planning & Control	1.0		
Year 2					
22.100 Basic Mathematics of Finance	1.0	22.935 Statistics for Business & Industry	1.5	Elective A	1.0 or 1.5
22.946 Facility Layout & Materiel Handling – Manufacturing	1.0	22.903 Operations Planning	1.5		
Year 3					
22.956 Management Information Systems	1.0	22.953 Project Planning & Scheduling	1.0	10.904 Supervisory Skills	1.0
Elective B	1.0 or 1.5	10.221 Organizational Behavior 1 or 10.325 Labor Relations 1	1.0 1.0		

Note: Elective A – Computer Systems
– Computer Language

Elective B – 22.963Mathematics for Management
– 22.904 Quality Control Methods
– 20.903 Marketing Research
– 16.904 Accounting for the Manager
– 22.901 Purchasing
– 10.321 Organizational Behavior 2
– 10.425 Labor Relations 2

Business Certificate in Materiels Handling

This program is designed for people who are in the purchasing or materiels handling functions. Its emphasis is in the quantitative approach to materiels management.

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		January (Term 2)		*April (Term 3)*	
Year 1	*Units*		Units		*Units*
22.901 Purchasing	1.0	22.902 Inventory Planning & Control	1.0	14.050 Data Processing – Introduction	1.0
16.904 Accounting for the Manager	1.0	22.100 Basic Mathematics of Finance	1.0		
Year 2					
22.941 Method Study – Manufacturing	1.0	22.935 Statistics for Business & Industry	1.5	Elective (a course from Marketing Management Technology	1.0
22.946 Facility Layout & Materiel Handling – Manufacturing	1.0	22.953 Project Planning & Scheduling	1.0		
or					
22.947 Facility Layout & Materiel Handling – Office	1.0				
Year 3					
22.956 Management Information Systems	1.0	22.906 Advanced Purchasing	1.0	10.904 Supervisory Skills	1.0
22.904 Quality Control Methods	1.0	Elective (from Marketing – Traffic & Distribution option	1.0		

22.100 BASIC MATHEMATICS OF FINANCE

Prerequisite: Basic algebraic skills to at least the Grade 11 level. Others should consider 22.900 Preparatory Business Mathematics.

This course is for persons wishing to know about the concept of interest and its effects upon business and industrial applications; and wanting to acquire competency in performing the appropriate calculations involving interest.

The student will be able to discriminate between the more common situations involving interest and to apply the necessary analysis to obtain solutions to these situations.

Outline: The subject material will be covered through lectures and readings accompanied by assignments and periodic tests. Topics include simple and compound interest, present values and discounts, annuities, evaluation methods and basic replacement analysis.

Term 1 Sept. 10 Wed. 1845-2145
Sept. 13 Sat. 0900-1200
12 weeks 1.0 Unit

22.900 PREPARATORY BUSINESS MATHEMATICS

This course will upgrade and refresh the mathematical knowledge of students intending to pursue Business Management programs. It will provide students with a suitable prerequisite for the mathematics programs in the Business Management Division, and meet the Algebra 11 entrance requirement.

Outline: The course consists of arithmetic, basic algebra, graphical techniques, ratio and percent, and elementary business applications of these concepts. The operation of electronic calculators is also covered. The method of instruction will basically be lecture classes using extensive practice problems as student assignments.

This course is non-credit (48 hours)

Term 1 Sept. 13 Sat. 0900-1300
12 weeks

begins again:

Term 2 Jan. 15 Thur. 1845-2145
16 weeks

22.901 PURCHASING

This course is for people preparing to enter the purchasing field, for those who are given buying responsibilities in a small operation along with other responsibilities, for people newly appointed to a purchasing department, and for those in related fields who will benefit from knowing the fundamentals of purchasing, for example, production, warehousing, maintenance personnel.

Students will gain a fundamental knowledge of the principles and practices of purchasing.

Outline: This course will include the functions of a purchasing department; the relationship and responsibilities to management; centralized purchasing; negotiating; buying for quality; quantity and price; timing and sources of supply; receiving and warehousing; and inventory control. See 22.902 for a supporting course in Inventory Planning and Control.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 13 Tue. 1845-2145

22.902 INVENTORY PLANNING AND CONTROL

Prerequisite: Students enrolling in this course must have some understanding of basic algebra.

This course is designed for people preparing to enter the inventory planning field and for those who interface with an inventory system and would benefit from knowing the fundamentals of inventory planning.

It will be of particular interest to people intending to enter the operations planning field and others such as purchasing agents, buyers, maintenance planners, production schedulers, sales managers, warehouse managers, mill storekeepers and parts men.

On successful completion of the course students will have a basic knowledge of the techniques used in the design and control of inventory systems.

Outline: forecasting inventory requirements (the need and the techniques); the ABC classification; material requirements planning; the role of the computer; inventory information flow and inventory control system design.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 12 Mon. 1845-2145

22.903 OPERATIONS PLANNING

Prerequisite: Inventory Planning and Control or permission of the coordinator

This course is for people preparing to enter the production control management field, for those who are presently working in a production environment such as production schedulers, production foremen shippers, etc., and for those working in related fields, for example – salespersons, stores personnel, or systems analysts.

On successful completion of Operations Planning the student should expect to have a fundamental knowledge of techniques used in the design and control of raw material production and sales coordinating systems; to be able to analyze an existing system and recommend changes to the information flow.

Outline: Through lectures, case studies and a factory simulation the course will cover the following materials: types of production environments; production information flow, inventory/production/sales relationships, forecasting production requirements, production planning, manpower and machine loading, scheduling, analyzing and controlling performance, the role of the computer and production control system design. Students will operate a factory for several weeks of consecutive plant operation through the facilities of a computerized production system simulator. This simulation will provide the student with a means of gaining experience in controlling and designing a total production system.

Term 2 Jan. 12 Mon. 1845-2145
18 weeks 1.5 Units

22.904 QUALITY CONTROL METHODS

People who would benefit from a knowledge of quality control will gain a basic understanding the principles of modern methods.

On successful completion of this course students will have an insight into the problems encountered achieving quality levels and an understanding of the important techniques used to solve problems of product quality in industry.

Outline: development of quality, planning for quality, organizing for quality, engineering a quality product, reliability and maintainability assurance, material control system, inspection and test, non-destructive testing, metrology and quality costs.

Term 1 Sept. 10. Wed. 1845-2145
12 weeks 1.0 Unit

22.906 ADVANCED PURCHASING

Prerequisite: 22.901 Purchasing

This course builds on 22.901 Purchasing and expands on several of the topic areas to provide the buying practitioner with detailed knowledge.

Students will gain a detailed knowledge of principles and practices of sales taxes, negotiation and law.

Outline: This 12-week course will delve into the areas of importing goods, federal and provincial sales and excise taxes, negotiating contracts, and law as it pertains to the purchasing function.

Term 2 Jan. 13 Tue. 1845-2145
12 weeks 1.0 Unit

22.935 STATISTICS FOR BUSINESS AND INDUSTRY

(Supersedes 22.535/635)

This course provides a comprehensive understanding of the techniques of elementary statistical methodologies used as aids to objective decision-making. The course is generally suitable for persons requiring statistics for initiating research in the fields of marketing, audit sampling, quality control, inventory control and business forecasting.

It will familiarize the student with a variety of basic statistical methods and enable the student to apply statistical methodologies in solving relevant problems in business and industry.

Outline: introduction to the use of statistics in business and industry; descriptive statistical techniques involving the collection and the treatment of data and a review of elementary set theory and probability; inferential statistical topics including sampling, estimation,

hypothesis-testing, goodness of fit, regression analysis, correlation, and time-series analysis will be covered.

Term 2 Jan. 13 Tue. 1845-2145
Jan. 15 Thur.
18 weeks 1.5 Units

22.941 METHOD STUDY – MANUFACTURING

This course is the fundamental course in operations management and is designed to create a systematic approach to problem-solving in manufacturing or warehousing operations.

Students will create a plan for solving problems and learn to apply this technique to the daily environment.

Outline: principles of systematic scientific problem-solving as related to manufacturing or warehousing operations; selection of study areas including economic feasibility; recording techniques, including assembly and display of data for analysis and dissemination; critical examination and development of alternative solutions for design and production problems; installation and maintenance of preferred solutions; importance and implications of human factors related to method study; motion economy and workplace design, supplemented by application of all topics to practical situations will be covered.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

22.943 PERFORMANCE MEASUREMENT

Prerequisite: 22.941 Method Study - Manufacturing or 22.948 Method Study - Office

Students will proceed from method study into the area of time analysis and relating costs of time.

The course will familiarize the student with various systems of recording time and establishing standard times for work.

Outline: The course will cover historical times, work sampling techniques, predetermined time systems, and the development of standard times from these techniques.

Term 2 Jan. 14 Wed. 1845-2145
12 weeks 1.0 Unit

22.944 PROJECT STUDY – MANUFACTURING

Prerequisite: 22.941 Method Study - Manufacturing, 22.943 Performance Measurement

This course will allow the student to apply the knowledge obtained in Method Study – Manufacturing Performance Measurement to an industrial problem.

It will allow the student to do a complete study through to a final report.

Term 3 Apr. 8 Wed. 1845-2145
6 weeks 0.5 Unit

22.946 FACILITY LAYOUT AND MATERIEL HANDLING FOR OPERATIONS MANAGEMENT MANUFACTURING CERTIFICATE

Prerequisites: 22.941 Method Study - Manufacturing; 22.943 Performance Measurement; 22.944 Project Study Manufacturing and 22.902 Inventory Planning and Control

This course is designed to present a systematic procedure in designing layouts along with determining alternative materiel handling systems.

It will enable students to do layout planning (both over-all and detailed) for plant or warehouse, in conjunction with determination of materiel handling systems.

Outline: Lectures, films and working sections coupled with home assignments to develop a basic working knowledge of how to solve layout and materiel handling functional design will be covered.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

22.947 FACILITY LAYOUT AND MATERIEL HANDLING FOR OPERATIONS MANAGEMENT OFFICE CERTIFICATE

Prerequisites: 22.948 Method Study - Office; 22.952 Systems & Procedures Manual; 22.954 Project Study Office and 22.902 Inventory Planning and Control

This course is designed to present a systematic procedure in designing layouts along with determining alternative materiel handling systems.

It will enable students to do layout planning (both over-all and detailed) for office environments, in conjunction with physical handling of paper and equipment selection.

Outline: Lectures, films and working sections coupled with home assignments to develop a basic working knowledge of how to solve layout and materiel handling functional design will be covered.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

22.948 METHOD STUDY – OFFICE

This course is the fundamental course in operations management and is designed to create a systematic approach to problem-solving and in office systems.

Students will create a plan for solving problems and learn to apply this technique to office environments.

Outline: principles of systematic scientific problem-solving as related to office environments; selection of study areas, including economic feasibility; recording techniques, including assembly and display of data for analysis and dissemination; critical examination and development of alternative solutions for design and office systems; installation and maintenance of preferred solutions; importance and implications of human factors related to method study; motion economy and workplace design, supplemented by application of all topics to practical situations will be covered.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

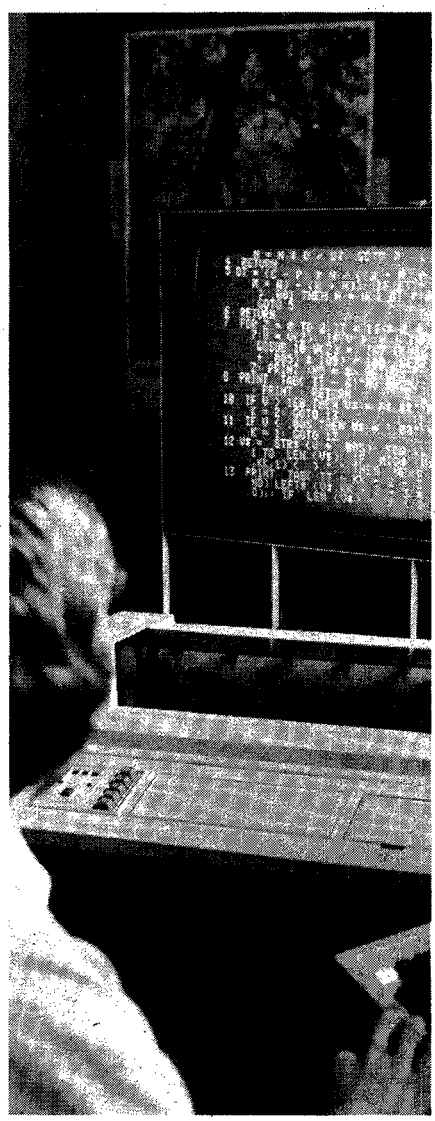
22.952 SYSTEMS AND PROCEDURES – MANUAL

This course is geared for people in office environments who require an understanding of information flow and its analysis.

This course will give the student competence in documenting office systems and analyzing those office systems.

Outline: The broad area of business funding purpose, goals and strategy will be examined. Conventional systems analysis techniques will then be introduced to examine in detail. In addition selected topics in current developments regarding the economic and human elements of the work structure will be examined.

Term 2 Jan. 12 Mon. 1845-2145
12 weeks 1.0 Unit



22.953 PROJECT PLANNING AND SCHEDULING

This course is designed for those who have a limited knowledge of the critical path method (CPM) or who wish to acquire a basic grounding in the CPM technique and its application to the management of projects. It will introduce the fundamentals of the critical path technique, especially in the area of planning, scheduling, resource allocation, and project management.

Outline: Through lectures, case studies, and a simulated construction project, the course material covers introduction to planning and scheduling techniques; Gantt charts; arrow diagrams; precedence diagrams; PERT; time-cost relationships; resource allocation; bid determination; project management; and the role of the computer.

Text: "Manual C.P.T. for Construction" by Collins, Know How Publications, Berkley, California

Term 2 Jan. 14 Wed. 1845-2145
12 weeks 1.0 Unit

22.954 PROJECT STUDY – OFFICE

Prerequisite: 22.948 Method Study - Office and 22.952 Systems and Procedures Manual

This course will allow the student to apply the knowledge obtained in Method Study – Office with knowledge learned in Systems and Procedures – Manual to an office problem.

It will allow students to do a complete study through to a final report.

Term 3 Apr. 8 Wed. 1845-2145
6 weeks 0.5 Unit

22.956 MANAGEMENT INFORMATION SYSTEMS

Prerequisite: 22.952 Systems and Procedures - Manual. This course will familiarize students with the requirements of a management information system.

It will enable the student to: use an overall managerial systems approach when working in the management information area; review, assess and evaluate information processing hardware and software; evaluate management needs for information, and integrate information needs into the management system; and design and implement a simple management information system.

Outline: The course is not intended to produce highly skilled MIS practitioners, but rather to provide an understanding of basic MIS concepts. This will enable the student to relate to MIS specialists and to managers in a large organization. In addition there will be sufficient detail to ensure that the student will know how to approach an MIS problem in a small organization that would not normally have MIS specialists on staff.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

22.963 MATHEMATICS FOR MANAGEMENT

Prerequisite: 22.935 Statistics for Business and Industry and preferably 22.100 Basic Mathematics of Finance

This course will provide a solid foundation in the type of mathematics fundamental to many of the quantitatively oriented business subjects, techniques, or formal programs of study (BCIT Business Certificate, M.B.A., B.Comm., R.I.A.)

Upon successful completion of this course, students will demonstrate fundamental knowledge of the common quantitative methods in business and industry by being able to recognize where these methods are appropriate, and to formulate solutions to elementary problems.

Outline: This course is an introduction to quantitative methods for business. Based upon the scientific method, the techniques utilize mathematics, statistics, and model building as an aid in the decision-making process for the operation of organizations. These techniques include cost-volume-profit analysis, linear programming, inventory control, queuing theory, simulation, and scheduling networks (CPM). The method of instruction will basically be lecture-classes using extensive practice problems as student assignments.

Term 2 Jan. 12 Mon. 1845-2145
Jan. 14 Wed. 1845-2145

18 weeks 1.5 Unit

COMBINED BUSINESS AND ENGINEERING CERTIFICATE PROGRAMS

The Division of Continuing Education and Industry Services will award combined Business and Engineering Certificates to students who successfully complete 15 units of study drawing courses from both areas. The object of these certificates is to provide a course of studies with a general business base which is flexible in the branch of engineering of interest to each individual.

Industrial Management Certificate
(Branch of Engineering)

	Units
Management in Industry 1 and 2	2.0
Method Study – Office	
or	
Method Study – Manufacturing	1.0
Performance Measurement	1.0
Project Study – Office	
or	
Project Study – Manufacturing	0.5
Business and Technical Correspondence	1.0
Business or Technical Report Writing	1.0
Pre-Approved Business Electives	2.5
Pre-Approved Engineering Electives	6.0
Total	15.0

Technical Marketing Certificate
(Branch of Engineering)

Marketing 1 & 2	2.5
Salesmanship 1	1.0
Business and Technical Correspondence	1.0
Business or Technical Report Writing	1.0
Pre-Approved Business Electives	2.5
Pre-Approved Engineering Electives	7.0
Total	15.0

On both the above certificates the main branch of engineering would be stated. For example: Industrial Management Certificate – Food Processing; and Technical Marketing Certificate – Forest Products.

The electives may be drawn from the main branch of engineering chosen from approved related areas. In some cases two or three units may be devoted to technical mathematics. These programs are not intended to lead to advanced level certificates. Students must have a complete program approved in advance.

ENGINEERING

Fees: Course fees for all regular course offerings are on page 4 .

Weeklong Courses: are identified by  . For complete listings, see pages 14 and 15 .

Downtown Courses: are identified by  . For dates and times, see pages 16 to 18 .

ENGINEERING COURSES AND CERTIFICATE PROGRAMS

44.904 FOOD PROCESSING

This course provides an overview of the basic methods of food preservation to persons already employed in food manufacturing or government inspection services or to those wishing to explore the food industry as a possible career field.

Outline: an introduction to the processes of canning, freezing, fermenting, concentrating, and dehydrating of foods. Experimental lots of foods will be preserved by these methods during laboratory periods.

This course will be offered in the fall of 1981/82.

44.906 QUALITY CONTROL FOR FOOD PROCESSING

The course is designed primarily for persons associated with the food manufacturing industry or allied government inspection services or for those wishing to explore this career area. It provides an introduction to the most frequently used quality control methods and emphasizes their importance in food processing.

Outline: general principles of quality control; inspection forms; acceptance sampling; control charts; instrumental measurement and specification of food quality; government standards and grades; sensory panel tests, including consumer tests; equipping a quality control laboratory.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

44.909 LANDSCAPE IRRIGATION

This course provides technical information and basic training for persons associated with or interested in turf and landscape irrigation.

Outline: lectures, demonstrations, problem sessions, and product displays will be used to provide an understanding of turf and landscape irrigation. Topics include basic hydraulic theory, system design, and construction fundamentals; scientific and practical aspects of water application; installation, operating and maintenance procedures for major types of irrigation systems.

This course will be offered in the fall of 1981/82.

44.910 SPORTS TURFGRASS MANAGEMENT 1

The course is designed for persons who are associated with maintenance of golf courses, municipal parks and outdoor recreational facilities. It is an introductory course in turfgrass management as applied to sports areas.

Outline: turfgrass botany (classification, nomenclature identification and utilization); weed, disease and insect problems and control strategy; soils (introduction and classification); soil amendments and fertilizers; tillage and cultivation systems; irrigation principles; irrigation equipment design and construction.

Term 2 Jan. 14 Wed 1845-2145
12 weeks 1.0 Units

44.916 PESTICIDES FOR RETAIL AND WHOLESALE DISPENSERS

This course is for persons engaged in retail or wholesale sales, who intend to write examinations under the Pharmacy Act to obtain certification as pesticide dispensers.

Students will have the opportunity to write the Pesticides Act examination under the direction of the B.C. Ministry of the Environment in the sixth week of the course.

Outline: lectures and problem sessions, discuss legislation, pesticide safety, pesticide formulations, storage and handling, prescribed uses and interpretation of the data in the various bulletins.

Term 1 Sept. 11 Thur. 1845-2145
6 weeks 0.5 Unit

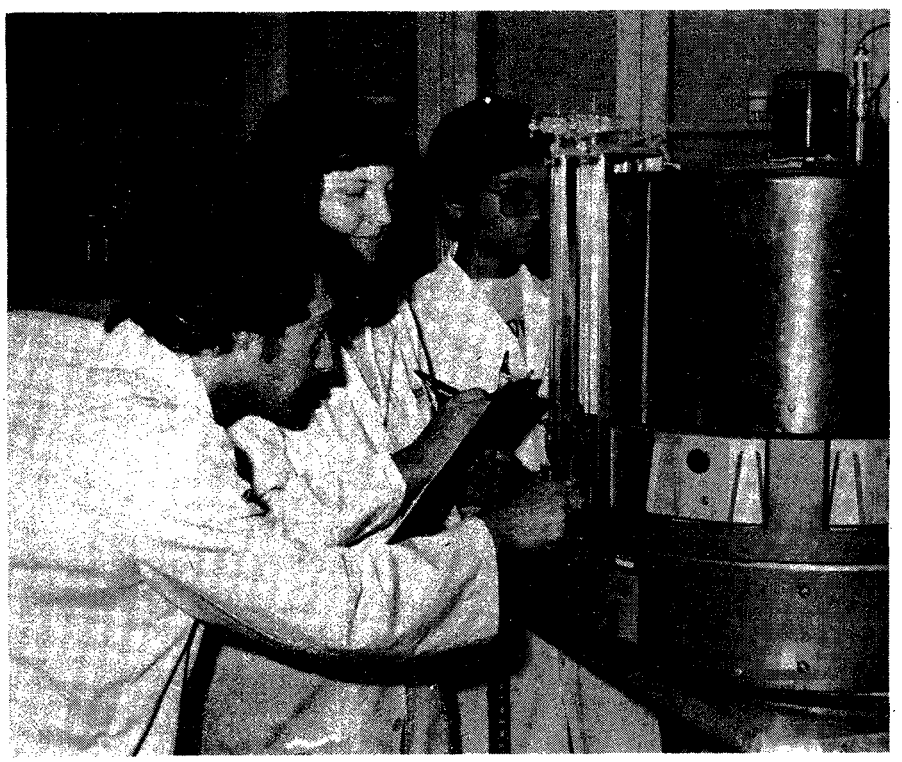
44.917 PESTICIDES FOR LANDSCAPE AND NURSERY

The course is for persons engaged in commercial landscape maintenance and nursery crop production who intend to write examinations under the Pharmacy Act to become Certified as Landscape Pest Abatement Applicators.

To provide a background and knowledge of pesticides used in B.C. Students will have the opportunity to write the Pesticides Act examination under the direction of the B.C. Ministry of the Environment in the sixth week of the course.

Outline: lectures and problem sets deal with legislation, pesticide safety, pesticide formulation, prescribed uses and interpretation of the data in the previous bulletins, and the responsibilities of pesticide applicators.

Term 2 Jan. 15 Thur. 1845-2145
6 weeks 0.5 Units



LANDSCAPE TECHNOLOGY

Engineering Technician Certificate in Landscape Technology

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
32.901 Algebra 2	1.0	32.902 Logarithms & Analytic Geometry	1.0	32.903 Trigonometry	1.0
49.900 Drafting Fundamentals	1.0	49.905 Drafting – Civil and Structural	1.0		
Year 2					
53.901 Structural Material	1.0	53.902 Soil Improvement	1.5	53.911 Plant Introduction	1.0
53.903 Grading and Drainage Plan Production	1.0	53.906 Basic Horticulture	1.5		
Year 3					
53.904 Landscape Structurals	1.0	53.910 Planting Plan	1.5		
53.907 Plant Material Study	1.0	Elective	0.5		

Electives and Substitutions

		Units
30.902	Chemical Principles 1	2.0
31.914	Technical Report Writing	1.0
33.508/608	Physics 1	2.0
44.909	Landscape Irrigation	1.0
44.910	Sports Turfgrass Management	1.0
44.917	Pesticides for Landscape & Nursery	0.5
53.905	Park and Recreation	1.5
53.908	Management	1.0
53.909	Cost Estimation	1.5

53.901 STRUCTURAL MATERIAL

This is the first part of the structural section in the Landscape Technology program.

This is an introductory course in structural material study for students with little or no experience in landscape technology. Structural materials include rock, brick, wood, asphalt, concrete, glass and plastic.

On successful completion of the course the student will have the foundation knowledge of the origin, qualities and use of the materials used in landscape design and management and will be able to specify appropriate materials for particular jobs.

Outline: The lectures will provide a cross-section of these materials and lead to specification exercises. Topics include selection and location of materials in the landscape.

This course will be offered in the fall of 1981/82.

53.902 SOIL IMPROVEMENT

This course forms the first part of the horticulture section within the Landscape Technology program.

This is a course in soil technology for those concerned with landscape development. It will allow a person with little or no knowledge of soil to understand soils and improvement of soil for healthy rigorous plant growth and to gain a basic knowledge of water and forest influence on soils in horticulture.

On successful completion of this course a student will have a basic knowledge of soil chemistry, biology and soil mechanics; basic knowledge of means and methods of soil improvement for plant development; of drainage and irrigation and have knowledge of soil compaction, permeability, soil pressure and their effects in horticulture.

Outline: subsoils, topsoils; organic and inorganic soil improvement media; erosion control; surface and subsurface drainage; irrigation; earth pressure of concern for retaining-walls and foundation structures in landscape projects.

This course will be offered in the winter term of 1981/82.

53.903 GRADING AND DRAINAGE PLAN PRODUCTION

Prerequisite: 49.905 Drafting - Civil and Structural

This is a course in grading and drainage plan production for persons with some previous training in technical drafting and knowledge of soil technology in landscaping.

On successful completion of the course a student will be capable of producing detailed plans showing grading of areas for landscape projects; be familiar with government regulations covering grading and drainage of land.

Outline: A mixture of lecture and discussion will lead to practical drafting exercises in detailed plan production. Before the last four nights of the course, the students will be given a home assignment to be presented on the last night of the course.

This course will be offered in the fall of 1981/82.

53.904 LANDSCAPE STRUCTURALS

Prerequisite: 49.905 Drafting - Civil and Structural and 53.901 Structural Materials

This course in detailing of landscape structural techniques will introduce persons with a basic knowledge of landscape materials and fundamental drafting techniques to the production of detailed plans for use in the landscape industry. Selection and use of structural materials in landscape projects are based on different criteria from those used in the building industry.

On successful completion of the course a student will have an improved skill in the knowledge of preparing landscape design drawings and be able to produce detail plans for structural items commonly used in landscape projects.

Outline: Course content will include lectures, field trips and drafting practice covering the following topics: access; driveways, walks, stairs, patios, plazas; retention; walls, cribbing, piling, bulkheads, fencing; water; ponds, streams, waterfalls, fountains; miscellaneous, pergolas, seats, fireplaces, landscape lighting and irrigation; presentation drawings, preparation, method of presentation, sketches; site work.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

53.905 PARK AND RECREATION

This is an introductory course in the design of parks and recreation facilities and/or maintenance.

On completion of the course the successful student will have a knowledge of the basic facilities required for public parks and recreation areas; of the layout of areas required for indoor or outdoor sports and other recreation facilities; of how and where to obtain information on applicable regulations, and of maintenance requirements for recreation facilities.

Outline: Course content will include lectures and discussions on the provision of recreational facilities: planning principles, space requirements for sports, art education, etc.; facilities, swimming pools, ice arenas, lawn bowling, curling, golf, marinas, resorts, beaches, children's playgrounds; general features, fences, walls, lights, parking, and general maintenance. Students will design and make drawings for a major community park.

Term 2 Jan. 15 Thur. 1845-2145
18 weeks 1.5 Units

53.906 BASIC HORTICULTURE

Prerequisite: 53.902 Soil Improvement

This course forms the second part of the horticulture section of the Landscape Technology program. This introductory course in horticulture and plant protection for landscape use will provide individuals with little previous knowledge of horticulture, a working knowledge of plants and their value in landscape developments.

On completion of the course the successful student will have a basic knowledge of botany; plant classification and identification; plant propagation; plant food requirements; hardiness; and the handling and protection of plants from nursery to future site.

Outline: Lectures and discussion will introduce ways of preparing plants for herbarium and students will be required to start an herbarium for use in subsequent courses 53.911 and 53.907.

Term 2 Jan. 13 Tue. 1845-2145
18 weeks 1.5 Unit

53.907 PLANT MATERIAL STUDY

Prerequisite: Plant Introduction 53.911

This course forms the fourth part of the horticulture section of the Landscape Technology program.

Students with a limited knowledge of plants will learn about plant materials with specific reference to their suitability for use in particular types of landscape projects. On successful completion of the course students will know the types and varieties of indigenous and exotic trees, shrubs and ground covers and the characteristics and values which aid in the selection of these materials for use in landscape.

The student will learn about trees, shrubs, herbaceous and evergreen ground covers and vines from lectures, discussion and field trips.

Outline: descriptions and characteristics, varieties, landscape use and value, cultural conditions, seven to ten year growth patterns, hardiness zones, availability and available sizes. Each student is expected to research specific varieties and species and include these along with the course material, presenting them in the form of a handbook, usable for future reference.

This course will be offered in the fall of 1981/82.

53.908 MANAGEMENT

This course in management for landscape technicians will provide a background of management skills required in the area of landscape developments, including the legal requirements affecting land use, contract documentation, ethics and professional liability.

On completion of the course the successful student will have the basic knowledge of professional responsibilities in respect to the consultant's relationship to client and contractor; the contractor/client relationship; the production of contract documents; legal liability; and contract supervision.

Outline: Lectures and discussion will give an insight into the practical relationship between client, contractor and consultant which must exist to produce acceptable development.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

53.909 COST ESTIMATION

This course will introduce persons with limited or no experience in cost estimation for landscape projects to methods of area and volume survey; study of work capacity; administration and maintenance costs; methods of journal keeping and accounting.

On successful completion of the course the student will be able to do area and volume surveys from landscape plans to establish quantity and capacity as bases for cost estimation.

Outline: mathematics, surface, area, volume; weights and measures; cuts and fills; work capacity, man-hours, equipment; overhead expenses; journals; bookkeeping and an introduction to the metric system.

Term 2 Jan. 12 Mon. 1845-2145
18 weeks 1.5 Units

53.910 PLANTING PLAN

Prerequisite: 53.903 Grading and Drainage and 53.904 Landscape Structurals

This course forms the fifth part of the horticulture section within the Landscape Technology program.

This course in planting plan production drafting will allow persons with some knowledge of horticulture, soil and plants and with some experience in technical drafting to further study plant material for use in landscape projects and to lay out detail planting areas.

On successful completion of the course a student will know about climate and soil tolerances and plant behavior in B.C.'s major populated areas and be able to produce detailed planting plans for a given land development master plan in B.C.

Outline: Lectures, discussion, and practice sessions present topics which include climate and soil condition, solitary, group and mass planting, plant size and quality, plant spacing; specification of material and planting procedure.

This course will be offered in the winter term of 1981/82.

53.911 PLANT INTRODUCTION

Prerequisite: 53.906 Basic Horticulture

This is the third part of the horticulture section of the Landscape Technology program.

This introduction to plant material for landscape uses consists mainly of field trips to introduce students with limited knowledge of trees, shrubs and herbaceous plants to plant material used for landscape development.

On completion of the course the successful student will know about suitability, size, form, colour and growing habit of trees, shrubs, vines and climbers, perennials, annuals and other herbaceous plants in this climatic zone.

Outline: Two lectures, two field trips to nurseries and eight field trips to other locations will introduce native trees, street trees, older park shrubs, herbaceous plants and turf to students. Students will be expected to collect leaves, twigs, etc. for the preparation of an herbarium for subsequent course 53.907 Plant Material Study.

Note: This course will be offered on six evenings followed by six Saturday mornings.

Term 1 Sept. 11 Thur. 1845-2145
(Sat. 0900-1200)
12 weeks 1.0 Unit

BUILDING TECHNOLOGY

Engineering Technician Certificate in Building Technology

The following courses make up the suggested program for the basic certificate minimum 15 units) attainable over three years. The three year period is flexible.
With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
32.901 Algebra 2	1.0	32.902 Logarithms and Analytical Geometry	1.0	32.903 Trigonometry	1.0
Year 2					
40.901 Drafting and Design Introduction	2.0	40.902 Drafting & Design Drafting Presentation	2.0	40.903 Drafting & Design Fundamentals of Design	2.0
Year 3					
40.512 Building Construction 1	2.0	40.612 Building Construction 1	3.0		
Elective	1.0				

Senior Engineering Certificate in Building Technology

The following senior certificate program is obtainable over a three year period. Courses in the Engineering Technician Certificate in Building Technology are prerequisites for this certificate.

Year 4					
Term 1	*Units*	*Term 2*	*Units*	*Term 3*	*Units*
40.522 Building Construction 2	1.0	40.622 Building Construction 2	1.5	31.910 Business & Technical Correspondence	1.0
40.914 Introduction to Construction Industry Procedures	1.0	40.915 National Building Code	1.0		
Year 5					
40.920 Estimating Construction Work 1	1.0	40.921 Estimating Construction Work 2	1.0	40.922 Estimating Construction Work 3	1.0
40.543 Building Services – Electrical		40.643 Building Services – Electrical	2.0	31.914 Technical Report Writing	1.0
Year 6					
40.954 Construction Administration	1.0	40.934 Construction Specifications	1.0		
40.974 Building Technology Computer Applications	1.0	Elective	1.0		

Electives and Substitutions

		Units
31.910	Business and Technical Correspondence	1.0
31.914	Technical Report Writing	1.0
40.522/622	Building Construction 2	2.5
40.543/643	Building Services – Electrical	2.0
40.914	Introduction to Construction Industry Procedures	1.0
40.915	National Building Code	1.0
40.920	Estimating Construction Work 1	1.0
40.921	Estimating Construction Work 2	1.0
40.922	Estimating Construction Work 3	1.0
40.934	Construction Specifications	1.5
40.954	Construction Administration	1.0
40.964	Project Management	1.0
40.974	Building Technology Computer Applications	1.0
42.103	Statics	1.0
42.205	Strength of Materials (Civil & Structural)	2.0
49.927	Plumbing System Design 1	1.0
49.520/620	Heating, Ventilation, Refrigeration and Air Conditioning Systems	2.0
51.540/640	Engineering Surveying	2.5

Day School Equivalency

Students interested in applying Continuing Education course credits toward day school courses should contact our Program Consultants for further details.

40.914 INTRODUCTION TO CONSTRUCTION INDUSTRY PROCEDURES

This course will introduce construction contracting procedures to persons already acquainted with building construction. A working knowledge of how construction contracts are made provides students with the prerequisite knowledge for other courses in estimating and construction specification.

Outline: basis of real property development; design, bidding and contracting procedures, types of construction contracts, principles of measurement; measurement and specification of construction work and the basis of construction costs.

Text: "Fundamentals of Construction Estimating and Cost Accounting", K. Collier, Prentice-Hall

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 14 Wed. 1845-2145

begins again:

Term 3 Apr. 8 Wed. 1845-2145

40.915 NATIONAL BUILDING CODE

This course will enable students to become familiar with the purpose, scope, and content of the current National Building Code of Canada. This will be of use to architects, draftsmen, building inspectors, contractors, mortgaging authorities, and those in similar areas of the construction industry who are designing, approving, or carrying our projects. This code is now in force in B.C. as a result of a provincial statute.

Outline: a short history of the code, general review of contents and detailed consideration of Part 3, Use and Occupancy and Part 9, Housing and Small Buildings.

Term 2 Jan. 15 Thur. 1845-2145
12 weeks 1.0 Unit

40.920 ESTIMATING CONSTRUCTION WORK 1

Prerequisite: Some knowledge of contemporary residential and commercial construction is desirable

This course will establish a base for construction estimating and is designed for people with no previous training. On completion of this course successful students will be prepared for CIQS Examination 103, "Measurement of Construction Work".

Outline: principles and techniques of measuring construction work; preparation of reliable measurements of concrete, formwork, excavation and rough carpentry.

Text: "Fundamentals of Construction Estimating and Cost Accounting", K. Collier, Prentice Hall

Term 1 Sept. 9 Thur. 1845-2145
12 weeks 1.0 Unit

40.921 ESTIMATING CONSTRUCTION WORK 2

Prerequisite: 40.920 Estimating Construction Work 1

This course will be beneficial to people seeking employment with subcontractors, general contractors or designers. Also, it will assist students to prepare for the CIQS Examination 203, "Measurement of Construction Work 2".

Upon completing the course a student will be more knowledgeable in construction measuring techniques and pricing methods, tendering procedures and budget estimating.

Outline: Through lectures, discussions and assignments the student will be guided through a series of realistic projects where he will measure construction work, determine and apply unit prices and prepare tenders.

Texts: "Fundamentals of Construction Estimating and Cost Accounting", K. Collier, Prentice Hall and "Means Cost Data", Means Co. Inc.

Term 2 Jan. 15 Thur. 1845-2145
12 weeks 1.0 Unit

40.922 ESTIMATING CONSTRUCTION WORK 3

Prerequisites: Extensive knowledge and experience of building construction will be necessary to understand the content of this course. A second class standing in 40.921 Estimating Construction Work 2 or a Diploma in Building Technology from a recognized Institute of Technology or the instructor's permission.

This course will further refine the measurement techniques introduced in Estimating Construction Work 2 and develop the knowledge and skills required to produce reliable prices for effective estimates. It will also assist students to prepare for the CIQS examination 302, Measurement of Construction Work 3 and 303 Pricing and Bid Procedure.

Through lectures, discussions and assignments the student will prepare selected portions of construction work to produce complete estimates.

Outline: the preparation of tenders, introduction to cost accounting, computer applications in the construction industry. A detailed study will be made of general cost factors, unit price analysis and bidding procedures; advanced problems in measurement and pricing techniques.

Texts: "Fundamentals of Construction Estimating and Cost Accounting", K. Collier, Prentice Hall, "Means Cost Data", Means Co. Inc., and "CIQS Method of Measurement", Canadian Institute of Quantity Surveyors

Term 3 Apr. 9 Thur. 1845-2145
12 weeks 1.0 Unit

40.934 CONSTRUCTION SPECIFICATIONS

This course will develop the student's understanding of specifications as bidding and contract documents and provide a specific knowledge of construction materials and methods. Successful students will be able to compile and interpret a specification of work in the structural and architectural trades. They will develop judgement in the selection and specification of construction materials and develop a relevant technical vocabulary.

Outline: writing and organizing specifications according to the uniform system; sources and use of data on selected structural and architectural materials, office organization and selected contractual procedures.

Term 2 Jan. 12 Mon. 1845-2145
18 weeks 1.5 Units

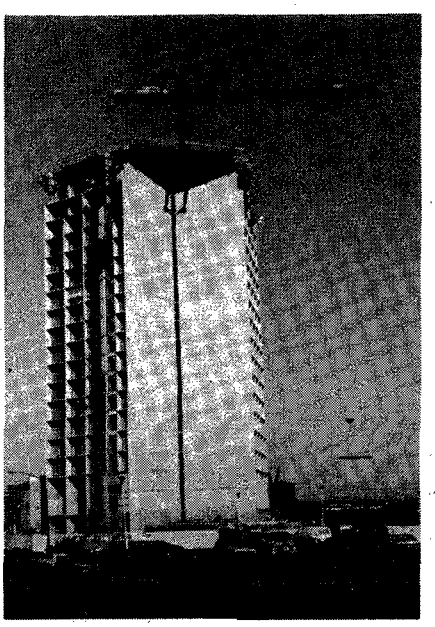
40.954 CONSTRUCTION ADMINISTRATION

Prerequisites: Extensive knowledge and experience of building construction will be necessary to adequately understand this course. A second class pass in 40.914 Introduction to Construction Industry Procedures or a diploma in Building Technology from a recognized institute of technology, or permission of the instructor. An entrance test may be given at the instructor's discretion.

Students will learn basic administration and operational procedure used in construction companies of various sizes. This course will prepare advanced students in building construction, CIQS and others experienced in the building industry, for middle management positions. The CIQS allow credit for subject No. 304 "Construction Administration" for successful completion of this course.

Outline: companies, partnerships and organizations; basic and contract accounting; estimating, scheduling, purchasing and general office practices (including computer processing); labor relations; yard and equipment control; interim financing and business development.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit



40.512/612 BUILDING CONSTRUCTION 1

This introductory course is intended for designers, draftsmen, builders, inspectors, and appraisers. After completing this course students will have an understanding of the basic principles of construction, a knowledge of standard practices, and the ability to prepare working drawings for residential and small commercial work.

Outline: light wood systems (stud and joist, post, beam and plank); masonry systems (brick, concrete block); introduction to characteristics of materials and application to interior and exterior finishing; detailing of doors, windows, stairs, cabinet work, fireplaces; application to preparation of typical working drawings for residential construction.

Text: "Building Construction Illustrated", F.D. Ching, Van Nostrand

Term 1 Sept. 8 Mon. & Wed. 1845-2145
12 Weeks 2.0 Units

continues

Term 2 Jan. 12 Mon. & Wed. 1845-2145
18 weeks 3.0 Units

40.522/622 BUILDING CONSTRUCTION 2

Prerequisite: 40.512/612 Building Construction 1 or permission of instructor

This course deals with fire-resistive construction.

After successful completion of this course students will better understand the principles of fire-resistive building construction.

Outline: construction systems and details; building science (weathering, deterioration and heat transfer); standard assembly of materials in industrial post and beam; masonry bearing, steel frame and concrete structures; curtain walls, panel walls, partitions; exterior and interior finishing materials and detailing. Assignments include free-hand, preliminary working drawing sketches.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

continues:

Term 2 Jan. 12 Mon. 1845-2145
18 weeks 1.5 Units

40.543/643 BUILDING SERVICES – ELECTRICAL

An introductory course in illumination and wiring buildings; selection and location of fixtures.

Outline: single and three-phase alternating current, including power, reactive power, power factor, load factor, elementary short-circuit analysis, and theory of lighting; equipment commonly encountered in building services; economic factors.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

continues:

Term 2 Jan. 13 Tue. 1845-2145
12 weeks 1.0 Unit

40.901 DRAFTING AND DESIGN – INTRODUCTION TO ARCHITECTURAL DRAFTING AND DESIGN

This course provides an introduction to architectural drafting and the history of architectural design for those with little or no experience. It provides training in most aspects of architectural drafting operation and will familiarize students with the technical vocabulary used. It also serves as preparation for advanced drafting presentation and design courses. On completion of the course a student can expect to be knowledgeable in the specific aspects of architectural design, be capable of performing a simple graphical presentation by utilizing most drafting equipment and be able to present ideas through free-hand sketching, lettering and drafting.

Outline: historical evolution of structural systems; materials used through the ages; and analysis of functional and visual aspects of design, covering the period from 4000 B.C. to the 19th Century.

NOTE: Technical vocabulary will be built by a comparative method through lectures on history and architecture. Drafting assignments will concentrate on building element description rather than on geometrical subjects.

Term 1 Sept. 9 Tue. & Thur. 1845-2145
12 weeks 2.0 Units

40.902 DRAFTING AND DESIGN – ARCHITECTURAL DRAFTING AND DESIGN PRESENTATION

Prerequisite: 40.901 Drafting and Design - Introduction or permission of instructor

To allow persons with drafting experience outside an architectural office to improve their comprehension of two and three dimensional graphical presentations, develop an understanding of constraints affecting the design. On completion of the course students will be familiar with the systematic approach to drawing presentation, be capable of explaining a design three-dimensionally, be aware of various design restrictions and be familiar with design services offered in industry.

Outline: descriptive geometry and its use in design presentation; description of building elements through isometric and axonometric drawing; presentation in one and two-point perspectives; preliminary and design drawings; application of regulations in design drafting and presentations.

Note: This course will be a guide to restriction in design and existence of approving authorities through all levels. Examination in this subject may be necessary to obtain credit.

Term 2 Jan. 13 Tue. & Thur. 1845-2145
12 weeks 2.0 Units

40.903 DRAFTING AND DESIGN – FUNDAMENTALS OF ARCHITECTURAL DESIGN

Prerequisite: 40.902 Drafting and Design

An introduction to architectural design as it relates to functional aspects, based on problems in residential buildings.

On completion of this course students can expect to be knowledgeable in the specific aspects of design principles, be able to take simple design problems and bring them to a satisfactory form for further design development, be able to understand client's statement of needs, be able to cope with basic design vocabulary and be capable of taking directions from a superior and delegating to a junior.

Outline: site determinants; program planning; living, dining, sleeping, dressing, kitchen and utility facilities, planning multiple dwellings, student residence, and other topics in the residential field.

Term 3 Apr. 7 Tue. & Thur. 1845-2145
12 weeks 2.0 Units

40.904 ARCHITECTURAL AND INDUSTRIAL ILLUSTRATION

The course will be of interest to anyone with a need to express design ideas in a visual form.

The objective of this course is to provide grounding in the fields of architectural and industrial illustration, giving participants a feel for the scope, styles, and techniques of contemporary presentation.

Outline: introduction to illustration; elements of rendering form and space, entourage techniques, perspective workshop, photographic techniques, black/white, color, and mixed media.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

40.964 PROJECT MANAGEMENT

Prerequisites: Extensive knowledge and experience of building construction or a second class pass in 40.914, Introduction to Construction Industry Procedures or a diploma Building Technology from a recognized institute of technology or permission of the instructor. An entrance test may be given at the instructor's discretion.

This course will prepare advanced students in building construction, CIQS and others experienced in the building industry, to meet the challenge of the "Management Contract" and the "Phased Construction Process". CIQS will give credit for subject No. 307 "Construction Project Management" if this course is completed successfully.

Students will learn the fundamentals of construction project management and advanced planning and cost control systems necessary to manage large commercial institutional projects.

Outline: principles of management, planning, subcontract administration, CPM and computer processing, cost control and relatd topics.

Text: "Professional Construction Management", Barrie & Paulson, McGraw-Hill.

Term 2 Jan. 15 Thur. 1845-2145
18 weeks 1.5 Units

40.974 BUILDING TECHNOLOGY COMPUTER APPLICATIONS

This introductory course deals with the use of computers in the building industry. It is designed for individuals with little or no computer experience.

Upon successfully completing the course students will have an understanding of the capabilities and limitations of the digital computer; a basic knowledge of computer hardware; sufficient programming to write and document simple BASIC programs and a knowledge of practical computer applications for the building industry.

Outline: Lectures will be given on computer programming, program documentation, computer hardware technology, computer systems, and computer graphics. Demonstrations will be given on feasibility studies, estimating, project planning and control, cost accounting, specification writing, codes and regulations, building appraisal, computer-aided design, and computer drafting. Lab work will comprise writing, documenting, and running building industry computer programs using BASIC language.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit
begins again:
Term 2 Jan. 15 Thur. 1845-2145

40.984 ECONOMICS OF BUILDING

The purpose of this course is to bring the student into contact with the financial and commercial aspects of building. It is intended to provide sufficient background to develop an understanding of a coherent framework within which the architect may estimate, budget, control and optimize building costs, as well as to provide an appreciation of the economics of commercial development. Emphasis is to be placed on the techniques, approaches and methods used, rather than on detailed estimating or calculation of definitive cost problems.

Outline: includes the following subject areas: building costs, factors which influence building costs, factors affecting costs of building elements or components, estimating techniques, cost control during design, supporting features for estimating and cost control, life cycle costing, development economics.

RECREATION FACILITIES MANAGEMENT

Engineering Technician Certificate in Recreation Facilities Management.

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
49.929 Heating, Ventilation and Air Conditioning Fundamentals	1.0	49.900 Drafting Fundamentals	1.0	14.050 Data Processing – Introduction	1.0
33.508 Physics 1	1.0	33.608 Physics 1	1.0		
Year 2					
10.325 Labor Relations 1	1.0	10.425 Labor Relations 2	1.0	31.902 Basic Business & Technical Communication	1.0
*54.101 Recreation Facilities Management 1	1.0	*54.201 Recreation Facilities Management 2	1.5	16.140 Accounting 1	1.0
Year 3					
20.903 Marketing Research	1.0	31.910 Business and Technical Correspondence	1.0		
49.927 Plumbing Systems Design 1	1.0	54.901 Swimming Pool Operation Maintenance and Water Chemistry	1.0		

*This is a day school course which can only be taken with the permission of the department head.

54.101 RECREATION FACILITIES MANAGEMENT 1

This is a day school course. Students require permission of the department head to attend.

This course covers the management of recreation services. Theories, trends and applications of recreation and leisure services management will be discussed.

Outline: theory and practice of management, MBO philosophy; motivation; design of organizations; interpersonal skills for management; marketing of leisure recreation services; budgeting; policy making and personnel management for recreation. Visits to local facilities will complement lecture and lab material where appropriate.

54.201 RECREATION FACILITIES MANAGEMENT 2

This is a day school course. Students require permission of the department head to attend. This course discusses the management of recreation facilities.

Outline: policy development; personnel management; decision-making processes; legal liability responsibilities; labor and management – professional interaction under unionization; principles of organization and staffing for efficient maintenance. Visits to local facilities will complement lecture and lab material where appropriate.

54.901 SWIMMING POOL OPERATION, MAINTENANCE AND WATER CHEMISTRY

Many of the hundreds of swimming pools in use today – public, apartment and backyard – are not properly maintained. Improper water condition and increased expense can result from neglect or misuse of the pool and its accessories.

This course will cover the efficient operation of the physical plant to produce clear, comfortable water and to maintain the equipment in safe and sanitary condition.

On successful completion of this course those who wish may take the National (U.S.) Swimming Pool Institute Certification examination.

Outline: circulation, filtration, chemical treatment and testing, equipment operation and maintenance.

Text: "Swimming Pool Operators Hand-book", D.G. Thomas, National Swimming Pool Foundation

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

CHEMICAL AND METALLURGICAL TECHNOLOGY

Engineering Technician Certificate in Chemical Laboratory Technology

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
30.902 Chemical Principles 1	2.0	30.903 Chemical Principles 2	3.0	31.914 Technical Report Writing	1.0
32.901 Algebra 2	1.0				
Year 2					
32.902 Logarithms and Analytic Geometry	1.0	*30.204 Chemical Laboratory Techniques	1.5		
		41.906 Glassblowing	1.0		
Year 3					
30.905 Organic Chemistry 1	2.0	30.906 Organic Chemistry 2	3.0		

Senior Engineering Technician Certificate in Chemical Laboratory Technology

The following senior certificate program (minimum 30 units) is attainable over three years. All courses shown for the Engineering Technician Certificate in Chemical Laboratory Technology are also required for this higher level certificate. Fifteen units are required for this certificate.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year	*Units*		*Units*		*Units*
30.510 Analytical Chemistry	2.0	30.610 Analytical Chemistry	3.0	31.910 Business and Technical Correspondence	1.0
32.507 Probability and Statistics 1	1.0	32.607 Probability and Statistics 1	1.0		
Year 2					
Electives	2.0	30.305 Chemical Instrumentation 1	1.0		
Year 3					
41.505 Mineral Analysis	2.0	*41.413 Environmental Analysis	2.0		
or					
*41.311 Pollution Science	2.0				

*This is a day school course which can only be taken with the permission of the department head.

Engineering Technician Certificate in Metallurgical Technology

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
32.901 Algebra 2	1.0	32.902 Logarithms and Analytic Geometry	1.0	32.903 Trigonometry	1.0
41.502 Metallurgy 1	1.0	41.602 Metallurgy 1	1.0	Elective	1.0
Year 2					
33.508 Physics 1	1.0	33.608 Physics 1	1.0	Elective	1.0
Elective	1.0	Elective	1.0		
Year 3					
41.503 Metallurgy 2	1.0	41.603 Metallurgy 2	1.0		
Elective	1.0	Elective	1.0		

Suggested Electives

The following electives are applicable to Chemical Laboratory and Metallurgical certificates:

		Units
30.305	Chemical Instrumentation 1	1.0
30.405	Chemical Instrumentation 2	1.0
30.510/610	Analytical Chemistry	5.0
30.908	Lab Safety and Organization	1.0
32.507/607	Probability and Statistics 1	2.0
41.314/414	Mineral Processing	2.5
41.505/605	Mineral Analysis	4.0
41.506/606	Introduction to Chemical Engineering	2.0
41.906	Glassblowing	1.0
41.907	Air Pollution – Chemistry and Sampling Techniques	1.0
41.908	Water Pollution – Chemistry and Sampling Techniques	1.5
42.103	Statics	1.0
42.205	Strength of Materials (C & S)	2.0
48.511/611	Process Instruments 1	2.0
48.512/612	Process Instruments 2	2.0
48.513/613	Process Instruments 3	2.0
49.900	Drafting Fundamentals	1.0

Paint Technician Certificate

The following courses make up the suggested program for the basic certificate minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
41.902 Paint Technology	1.5	32.902 Logarithms		32.903 Trigonometry	1.0
32.901 Algebra 2	1.0	& Analytic Geometry	1.0	—	
		Elective	1.0		
Year 2					
30.902 Chemical Principles 1	2.0	30.903 Chemical Principles 2	3.0	Elective	1.0
41.903 Paint Technology – Part 1	1.5				
Year 3					
31.91031.910 Business and Technical Correspondence	1.0	31.914 Technical Report Writing	1.0		
		Elective	1.0		

Suggested Electives

30.510/610	Analytical Chemistry	5.0
30.905	Organic Chemistry 1	2.0
30.906	Organic Chemistry 2	3.0
30.908	Lab Safety and Organization	1.0
30.913	Gas and Liquid Chromatography	1.0
32.507/607	Probability and Statistics 1	1.0
41.904	Paint Technology Part 2	0.5
41.905	Paint Technology Part 3	0.5

41.311 POLLUTION SCIENCE

Prerequisite: 30.902/903 Chemical Principles 1 and 2

This is a day school course. Students must obtain permission from the Department Head to attend

The course presents an introduction to the organic chemistry of industrial pollution. Application local industry is emphasized.

1.0 Unit

41.314/414 MINERAL PROCESSING

This course will deal specifically with mineral processing as applied to the B.C. mining industry.

Outline: The course covers the essential operations of applied mineral processing, i.e. crushing, grinding, screening, gravity separation, cyclone classification; flotation, sedimentation, thickening, filtration. Design and solutions of operating problems are emphasized. Some laboratory work will be performed.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

continues:

Term 2 Jan. 14 Wed. 1845-2145
12 weeks 1.0 Unit

41.413 ENVIRONMENTAL ANALYTICAL METHODS

Prerequisite: 30.510 Analytical Chemistry or equivalent

This is a day school course. Students require permission of the Department Head to attend.

This course surveys methods of analysis for water, waste water and materials related to control of sanitation and water quality.

Reference is made to the most recent edition of "Standard Methods for the Analysis of Water and Waste Water" published by the American Public Health Association. However in many cases adaptation and improvements are introduced.

Outline: Analysis of field samples for some of the following will be done: cyanide, pesticides, arsenic, mercury, nitrogen, surfactants, phosphates, sulphates, chlorides, proteins, carbohydrates, tannin and lignin, phenols and heavy metals. Special attention is given to proper sampling techniques.

2.0 Units

41.448 POLLUTION CONTROL EQUIPMENT AND TECHNIQUES

This course will familiarize the student with engineering methods currently used for the control and/or treatment of the major air and water pollutants.

Outline: electrostatic precipitators, scrubbers, cyclone collectors, fabric filters, control of motor vehicle emissions, stack sampling, cooling towers, industrial and municipal wastewater treatment processes, oil spill recovery techniques, solid waste disposal methods and treatment of radioactive wastes.

This course will be offered in 1981/82.

41.502/602 METALLURGY 1

This introductory course will acquaint students with the concepts of basic physical metallurgy and with metallurgy testing methods. Those completing the course will have an understanding of metallurgical principles and methods of physical testing and metallography.

Outline: casting and forming of metals, heat treatment, physical testing, nondestructive testing and metallurgy of welding. Laboratory work involving metallography, heat treatment and corrosion constitutes approximately half of the course. Field trips to material processing plants will be arranged.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

continues:

Term 2 Jan. 12 Mon. 1845-2145
12 weeks 1.0 Unit

41.503/603 METALLURGY 2

Prerequisite: 41.502/602 Metallurgy 1

This course will develop the subject areas covered in Metallurgy 1 to a more advanced level.

Outline: iron and steel-making processes, solidification of metals and alloys, casting methods and defects, foundry technology, metal-forming operations, review of phase diagrams for binary alloy systems, isothermal transformations in steels, heat-treating techniques, non-ferrous metals and alloys, welding metallurgy, principles of nondestructive testing. Lectures and field trips to industrial plants are supplemented by laboratory sessions which emphasize physical testing of materials, metallography, service failure investigation and nondestructive testing.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

continues:

Term 2 Jan. 13 Tue. 1845-2145
12 weeks 1.0 Unit

41.505/605 MINERAL ANALYSIS

Prerequisite: 30.902/903 Chemical Principles 1 and 2 or equivalent is highly desirable

This course will deal specifically with chemical methods of ore analysis and provides students with a working background in analytical chemistry or assaying with an opportunity to develop laboratory skills. Students are encouraged to attempt the provincial examination for the B.C. government licence to practice assaying in B.C.

Outline: general methods of ore analysis; principles and practice of fire assaying for gold and silver; gravimetric and volumetric analysis.

This course will be offered in 1981/82.

41.506/606 INTRODUCTION TO CHEMICAL ENGINEERING

This course will have particular interest for mechanical, civil and electrical engineers employed or associated with chemically based industries who do not have a formal background in unit operations of the chemical process industries. It will also be of interest to people studying for professional engineering examinations.

BCIT has one of the best equipped unit operations laboratories of its type for demonstration and experimental purposes.

Outline: unit operations include such areas as heat transfer, evaporation, materials transfer, and distillation in industries such as pulp and paper, refining, and food processing.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

continues:

Term 2 Jan. 12 Mon. 1845-2145
12 weeks 1.0 Unit

41.902 PAINT TECHNOLOGY

This introductory course is designed for those actively engaged in paint and coatings manufacture (both technical and production sides), raw material suppliers, architects, professional decorators, and paint salesmen.

On successful completion of the course students will have an understanding of the raw materials used in the coating industry, the methods by which coatings are manufactured, application methods and formulating techniques.

Term 2 Jan. 12 Mon. 1845-2145
18 weeks 1.5 Units

41.903 PAINT TECHNOLOGY – PART 1 – LATEX PAINTS

Prerequisites: 41.902 Paint Technology

Lectures and laboratory presentations are designed to complement the basic course in Paint Technology.

On successful completion of the course, students will be knowledgeable about latex paints.

Outline: topics include aspects of polymer emulsion manufacture and the formulation and manufacture of latex paints.

This course will be offered in 1981/82.

41.904 PAINT TECHNOLOGY – PART 2 – ALKYD RESINS

Prerequisite: 41.902 Paint Technology

Lectures and plant visits are designed to complement the basic course in Paint Technology.

On successful completion of the course, students will be knowledgeable about alkyd resins.

Outline: topics include raw materials, formulative and manufacturing techniques of alkyd resins, and the use of resins in alkyd finishes.

This course will be offered in 1981/82.

41.905 PAINT TECHNOLOGY — PART 3 — MODERN COATING RESINS

Prerequisite: 41.902 Paint Technology

This course is designed to acquaint the student with surface-coating resins used in the production of todays finishes. The course complements the basic course in Paint Technology.

On successful completion of the course, students will have a good understanding of the resins used in modern finishes, and with their end use.

This course will be offered in 1981/82

41.906 GLASSBLOWING

This introductory course will develop skills in the heat working of glass tubing.

Outline: identification of glasses; preparation and cutting of glass; procedure for working with tubing; pulling points, seals, straight tubes, round and flat bottom tubes; sealing, bands, blowing bulbs, ring seals, side arms, small condensers, flask joints, columns and coil winding.

Term 2 Jan. 13 Tue. 1845-2145
12 weeks 1.0 Unit

41.907 AIR POLLUTION: CHEMISTRY AND SAMPLING TECHNIQUES

This course is suitable for people with varied experience in air pollution, or those interested in the pollution monitoring field. Portions of the course content may be changed on request of the participants.

Outline: the chemistry of the major air pollutants and their interactions in the atmosphere (the oxides of sulphur, and nitrogen, carbon monoxide, carbon dioxide, hydrocarbons, particulates – including heavy metals – chlorocarbons and fluorocarbons); the effects of air pollutants on human health and on the environment; the collection of air pollutant samples by several methods and the analysis of pollutant samples by various techniques, (infra-red, gas chromatography, and atomic absorption).

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

41.908 WATER POLLUTION: CHEMISTRY AND SAMPLING TECHNIQUES

Prerequisite: Chemistry 12 or equivalent

This course will provide an understanding of the processes that take place in water systems when pollutants are present and will familiarize the student with the various techniques used for detection and control of these pollutants. Portions of the course content may be changed on request of the participants.

Outline: the chemistry and microbiology of the major water pollutants, the major sources of pollutants; their interactions in the environment and methods of control and/or treatment; laboratory analysis of water samples.

Term 2 Jan. 13 Tue. 1845-2145
18 weeks 1.5 Units

FOREST PRODUCTS

46.502/602 PULP AND PAPER MANUFACTURE

This course will provide a detailed background relating to the pulp and paper industry of British Columbia for those presently employed in manufacturing, service functions and allied industries. It will impart an understanding of the processes employed and information on the mechanical equipment utilized in the manufacture of pulp and paper.

Outline: wood structure and chemistry, water treatment, mechanical and chemical pulp manufacture, pulp bleaching, kraft recovery systems, chemical preparation and handling, pollution abatement, paper and paperboard manufacture, mill hazards and safety, possible future developments. Guest lecturers will discuss highly specific areas. Evening field trips to related plants will be scheduled and students should be prepared to undertake two Saturday plant visits. Laboratory demonstration of related equipment will be provided.

The times and dates for this course offering will be announced.

46.504/604 LUMBER AND PLYWOOD MANUFACTURE

This course will supplement the technical knowledge of individuals directly or indirectly involved in the wood products industry. Aspects of the manufacturing processes and services related to the production of lumber and plywood will be covered.

Outline: sawmill and planermill operation, saw technology, lumber seasoning, plywood manufacture, recovery, quality control, maintenance organization, accident and fire prevention, mobile equipment, environmental control. Coastal operations will be compared with those located in the B.C. Interior. Classroom discussion will be encouraged and laboratory demonstrations of related equipment will be given.

This course will be offered in 1981/82.

MINING TECHNOLOGY

Engineering Technician Certificate in Mining Technology

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
32.901 Algebra 2	1.0	32.902 Logarithms & Analytic Geometry	1.0	32.903 Trigonometry	1.0
50.101 Geology	1.0	50.201 Geology	1.0	Elective	1.0
Year 2					
33.508 Physics 1	1.0	33.608 Physics 1	1.0	Elective	1.0
50.904 The Mining Industry	1.0	Elective	1.0		
Year 3					
31.910 Business & Technical Correspondence	1.0	31.914 Technical Report Writing	1.0		
Elective	1.0	Elective	1.0		

Suggested Electives

		Units
31.914	Technical Report Writing	1.0
33.404	Mining Geophysics	1.5
41.314/414	Mineral Processing	2.0
41.505/605	Mineral Analysis	4.0
42.103	Statics	1.0
42.205	Strength of Material	2.0
49.900	Drafting – Fundamentals	1.0
51.540/640	Engineering Surveying	2.5

50.101/201 GEOLOGY

This course will allow people in the mining industry who have had no formal training in geology, a framework on which previous and future geological experience can be organized. This course is suitable for anyone with an interest in general geology.

In addition to gaining an outline of geology as related primarily to mining, the student will be competent in identifying the common economic and rock forming minerals and in classifying the more common rock types. He will have some appreciation of the economic value of minerals, and an insight into the structural problems associated with orebodies.

Outline: definition, basic concepts, earth's crust, geologic time, atomic structure of minerals, crystal forms, and symmetry systems; properties of common minerals; sedimentary rock types; clastic and chemical sedimentaries; igneous rock types; classification, deformation of earth's crust: folds, faults, metamorphic rocks; weathering erosion and glaciation; economic geology, mineral fuels, nonmetallics, ore deposits and their controls; geological history: precambrian, paleozoic, mesozoic, tertiary, pleistocene, geologic maps.

A full day field trip will be included during the term.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

continues:

Term 2 Jan. 14 Wed. 1845-2145
12 weeks 1.0 Unit

50.901 GENERAL INTEREST GEOLOGY AND PROSPECTING

This is an introduction to the basic principles of geology and how these are applied to prospecting. At the same time some of the methods and equipment used in prospecting will be discussed. This course is designed for the part-time and full-time prospectors.

The student will be capable of identifying the common rock-forming minerals, rocks and ore minerals; will have an appreciation of geological structures and what constitutes an ore deposit; will be able to read topographic and geological maps and understand the procedure for staking claims; will have some proficiency in the use of the magnetic compass, dip needle, scintillometer, mineral lamp, gold pan, and geochemical soil-sampling kit; and will understand the application of diamond drilling.

Outline: The topics indicated in the above objectives will be studied in a very practical "hands-on" approach. Lectures and films will be used to assist in giving the student practical prospecting techniques.

A full day field trip will be included during the term.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks (14 sessions)

begins again:

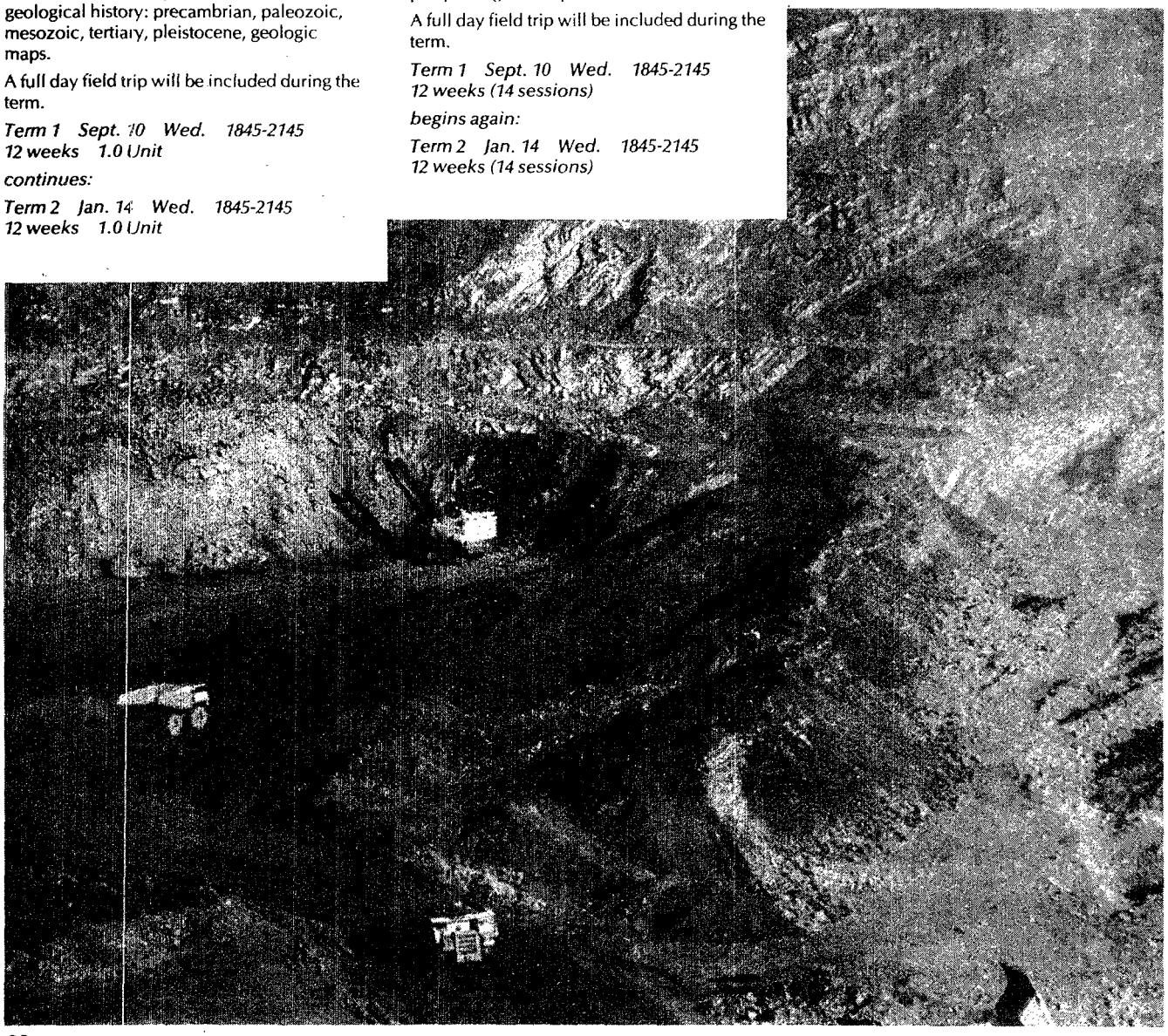
Term 2 Jan. 14 Wed. 1845-2145
12 weeks (14 sessions)

50.904 THE MINING INDUSTRY (replaces 50.102/202)

The intention of this course is to provide a background for those unfamiliar with the industry, or those wishing to put their own interests in perspective (for example: prospectors, accountants, chemists, equipment suppliers). The course can be slightly modified to suit the aspirations of those registered.

Outline: Introduction – the importance, nature, subdivisions, and economic framework of the mining industry. Exploration techniques – brief descriptions of geology, geophysics, and geochemical principles. Mining methods – surface and underground, particularly those common in B.C. Reclaimation methods are included. Treatment methods – extractive metallurgy techniques concentrate the ore values. Smelters contract aspects are discussed. Evaluation of a mine or prospect.

Term 1 Sept. 10. Wed. 1845-2145
12 weeks 1.0 Unit



NATURAL GAS AND PETROLEUM TECHNOLOGY

Engineering Technician Certificate in Natural Gas and Petroleum Technology

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
32.901 Algebra 2	1.0	32.902 Logarithms and Analytic Geometry	1.0	32.903 Trigonometry	1.0
47.521 Distribution and Utilization – Gas	1.0	47.621 Distribution and Utilization – Gas	1.0	Elective	1.0
Year 2					
30.902 Chemical Principles 1	2.0	30.903 Chemical Principles 2	3.0		
47.501 Gas and Oil Production and Transmission	1.0	47.601 Gas and Oil Production and Transmission	1.0		
Year 3					
Elective	1.0	Elective	1.0		

Suggested Electives

		Units
31.910	Business & Technical Correspondence	1.0
31.914	Technical Report Writing	1.0
33.508/608	Physics 1	2.0
41.502/602	Metallurgy 1	2.0
48.511/611	Process Instruments 1	2.0
48.512/612	Process Instruments 2	2.0
51.540/640	Engineering Surveying	2.5

47.501/601 GAS AND OIL PRODUCTION AND TRANSMISSION

Outline: petroleum geology, reservoirs, exploration well-drilling, field production and treatment, conservation, gathering and transmission systems, pipeline construction and maintenance, corrosion protection, compressor and pumping stations, flow computations, economics of design, measurements, laws and regulations.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

continues:

Term 2 Jan. 15 Thur. 1845-2145
12 weeks 1.0 Unit

47.502/602 INTRODUCTION TO PETROLEUM PRODUCT UTILIZATION

This course is intended for persons involved in the sales and use of petroleum products. While all petroleum products will be covered, particular attention will be given to lubricants and power transmission by hydraulic fluids.

Outline: petroleum hydrocarbons, crude oils, reservoirs and wells, refinery operations, production of lubricants, special properties and additives, internal combustion engines, fuel and lubrication, design of gear power transmissions and gear lubrication, design of hydraulic fluids, product tests and specifications, metallurgical aspects of wear and failure, preventive maintenance by lubricant analysis.

This course may be offered in 1981/82.

47.521/621 DISTRIBUTION AND UTILIZATION – GAS

Outline: city gas stations; regulations and colorization; high, medium, and low-pressure distribution systems; network analysis; service regulations; meters; combusion stoichiometry; furnaces, boilers, installation codes; industrial and power utilization; corrosion control; peak shaving; storage.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

continues:

Term 2 Jan. 14 Wed. 1845-2145
12 weeks 1.0 Unit

47.531/631 REFINING AND UTILIZATION – OIL

Outline: crude oil distillation, cracking, thermal and catalytic, reforming, hydrogenation; oil products, product testing, storage, loading, combustion stoichiometry; oil and gas engines, oil burners.

This course may be offered in 1981/82.

CIVIL AND STRUCTURAL TECHNOLOGY

Engineering Technician Certificate in Civil and StructuralTechnology

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
32.901 Algebra 2★	1.0	49.900 Drafting Fundamentals★	1.0	32.903 Trigonometry★	1.0
51.540 Engineering Surveying★		51.640 Engineering Surveying★	2.5	32.902 Logarithms and Analytic Geometry★	1.0
Year 2					
42.103 Statics★	1.0	42.205 Strength of Materials★	2.0	31.902 Basic Business and	
33.508 Physics 1★	1.0	33.608 Physics 1★	1.0	Technical Communication★	1.0
Year 3					
42.905 Soil Mechanics 1☆	1.0	49.905 Drafting C & S☆	1.0	32.931 Calculus 1	2.0
42.104 Concrete Technology☆	1.0	31.914 Technical Report Writing☆	1.0		

Note: ★ Required courses for Technician Certificate.
☆ Required courses for Senior Certificate.

Senior Engineering Technician Certificate in Civil and Structural Technology

The following senior certificate program (minimum 30 units) is attainable over three years.

All courses shown for the Engineering Technician Certificate in Civil and Structural Technology are also required for this higher level certificate. Fifteen units are required for this certificate.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 4	*Units*		*Units*		*Units*
42.102 Hydrology☆	1.0	42.202 Hydraulics☆	1.5		
42.914 Transportation Eng.☆	1.0	Civil Elective☆	1.5		
Year 5					
42.901 Structural Analysis☆	1.0	Structural Elective	1.0-2.0		
Approved Elective	1.0	Civil or Structural Elective	1.0-2.0		
*Year 6**					
31.910 Business & Technical Correspondence	1.0	32.932 Calculus 2	2.0		
		Civil & Structural Elective	1.0-2.0		

Note: ☆ Required courses for Senior Certificate.
* Year 6 of the Senior Certificate Program and years 7, 8, 9, and 10 of the National Diploma can be taken in any order or rearranged to suit availability.

National Diploma in Civil and Structural Technology

The following National Diploma program (minimum 50 units) is attainable over four years. All courses shown for both the Engineering and Senior Technician Certificates in Civil and Structural Technology are also required for this higher level diploma. Twenty units are required in this final phase to the diploma.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
*Year 7**	*Units*		*Units*		*Units*
Approved Elective	1.0	Civil or Structural Elective	1.0-2.0	32.933 Calculus 3	2.0
22.941 Method Study – Office 1	1.0				
*Year 8**					
33.509 Physics 2	1.0	33.609 Physics 2	1.0		
Approved Elective	1.0	Civil or Structural Elective	1.0-2.0		
*Year 9**					
32.609 Numerical Methods	1.0	32.509 Introductory Numerical Methods & Computer Prog.	1.0		
Civil or Structural Elective	1.0-2.0	Approved Elective	1.0		
*Year 10**					
42.912 Estimates & Contracts for Heavy Construction 1	1.0	42.913 Estimates & Contracts for Heavy Construction 2	1.0		
22.942 Method Study – Office 2	1.5	31.920 Advanced Business and Technical Correspondence	1.0		

*Years 6, 7, 8, 9 and 10 could be taken in any order or rearranged to suit availability.

Civil Electives

All of the following electives are required for a National Diploma.

		Units
42.906	Soil Mechanics 2	1.5
42.915	Highway Design and Construction	1.5
42.916	Municipal Services	1.5
42.918	Subdivision Planning and Design	1.5

Structural Electives

Three electives are required for a National Diploma.

		Units
42.507/607	Structural Detailing	2.0
42.902	Structural Design in Steel and Timber	1.5
42.903	Structural Design in Reinforced Concrete	1.5
42.917	Computer Methods of Structural Analysis	1.0

Approved Electives – See Program Consultant for details.

42.102 HYDROLOGY

This introductory course will present basic concepts and techniques of small watershed analysis, and the type of work involved in the design, supervision and construction of drainage facilities. It should be of interest to persons engaged in municipal, highways, agricultural, flood control, and other water resources work.

Outline: The course will introduce the fundamental concepts of hydrologic analysis, from a practical viewpoint. Lectures and design projects will cover the following topics: the hydrologic cycle, weather and hydrology, precipitation types and measurement, snowmelt, run-off, streamflows and stream gauging, evaporation and transpiration, infiltration, storage, flood estimation, frequency analysis, ground water movement and wells, sediment transport and deposition, and an introduction to open channel flow and culvert hydraulics. Assigned problems will illustrate the use of flood frequency analysis, run-off coefficients, rainfall intensity-duration-frequency curves, hydrographs, mass curves, and level pool flood routing techniques. Two projects will involve the hydrologic design of conventional and detention-type storm-drain systems for small watersheds.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

42.103 STATICS

This course and 42.205 Strength of Materials, provides the background for all civil engineering courses, especially those in the structural area.

Outline: historical development and relationship to structural design; vectors; force systems; graphical representation; resultants and components; moments and couples; conditions of equilibrium; force polygon; funicular polygon; co-planar systems; three-dimensional systems; frames and trusses; stress diagram and Bowe's notation; chains and cables; vertical shear force and bending moment diagrams; related problems and experiments; with emphasis on bridge and building structures and retaining walls.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

begins again
Term 2 Jan. 15 Thur. 1845-2145
12 weeks 1.0 Unit

42.104 CONCRETE TECHNOLOGY

This introductory course will present the theory and practice used in the design, manufacture, construction and quality control of concrete to contractors, foremen, concrete finishers, inspectors and others.

After completing this course a student will have the knowledge required to select suitable materials for making quality concrete, to design a concrete mix for strength, workability and economy, to sample and to conduct quality control tests on concrete and aggregates; and to understand theory and practices used in concrete manufacturing and construction.

Outline: cement (types, manufacture, reaction); water requirements; aggregates (properties, production, requirements, sampling and testing); admixtures (air entraining, water reducers, retarders, calcium chloride, pozzolans); concrete properties (strength, durability, permeability, workability, sampling and testing); concrete mix design; production (batching, mixing, transporting, placing, finishing, curing).

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

begins again

Term 2 Jan. 14 Wed. 1845-2145
12 weeks 1.0 Unit

42.202 HYDRAULICS

This course will introduce the fundamental concepts of hydraulics, from a practical viewpoint. While most example problems are drawn from civil and municipal engineering, the principles are equally applicable to plant or process hydraulics.

Outline: Lectures, laboratory sessions and design projects cover the following topics: fluid statics, definitions of flow types, continuity, Bernoulli equation, energy/momentum relationship, flow in pipe networks, the function of storage in waterworks networks, open channel flows, surges, water hammer, hydraulic jumps, culvert flows, capacities, back water curves, nozzles, syphons, weirs, orifices, meters, valves, pumps, turbines, model testing. Some advanced topics are covered descriptively. Two laboratory sessions involve the use of venturis, nozzles, and weirs, and demonstrate flow characteristics in a pipe network and the open channel hydraulic flume. Two design projects involve the hydraulic design of typical waterworks distribution and sanitary or storm sewage collection systems.

Term 2 Jan. 12 Mon. 1845-2145
18 weeks 1.5 Units

42.205 STRENGTH OF MATERIALS

Prerequisite: 42.103 or 42.900 Statics.

Draftsmen and people in design offices will find this course work useful. Some opportunity for experience in materials testing is provided.

Outline: simple stresses; stress, strain, elasticity; compound bars and columns; temperature stress; elastic limit; limit of proportionality; yield, ultimate; factor of safety; load factor, ductility; resilience, fatigue, shock; properties of sections, bending moments, shear forces, theory of flexure, slope and deflection of beams, restrained and continuous beams; strut theories, eccentric leading, lateral loading; compound stress and strain, ellipse of stress, Poisson's ratio, principal stresses and strains, Mohr's circle; testing techniques, machines, extensometers, strain gauges, photo-elasticity analysis of steel and timber beams and columns, evaluation of results.

Note: This course will run 18 nights on Thursdays and 6 nights on Tuesdays.

Term 2 Jan. 15 Thur. 1845-2145
24 sessions 2.0 Units

42.507/607 STRUCTURAL DETAILING

Prerequisite: 49.900 Drafting Fundamentals and 49.905 Drafting Civil and Structural or permission of the instructor

This course will provide a good basic knowledge of structural detailing as it applies to wood, steel and reinforced concrete structures.

At the end of the course, students should be able to solve most of the problems associated with designing and drafting of joints in lumber structures; joints and assembly in steel structures; and reinforcing details and Rebar Lists for reinforced concrete structures.

Students will be required to design and draw solutions to detailing problems taken from actual structures in wood, steel and reinforced concrete including bills of materials and Rebar Lists. Although the practical aspects are emphasized, the theory is investigated in some depth. Text books will be complemented by handbook material in accord with the latest industrial standards.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

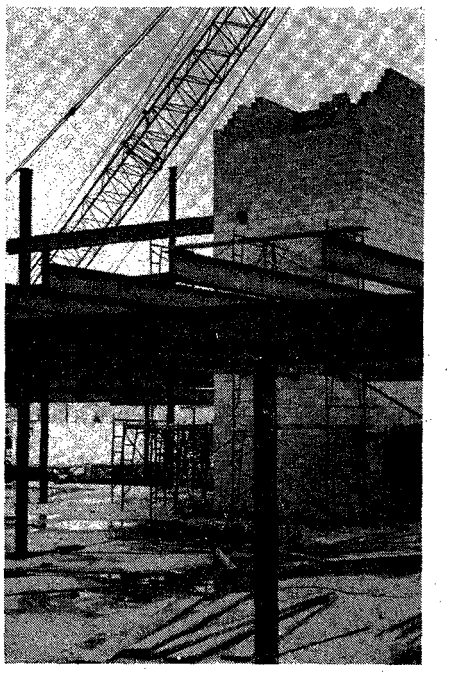
continues

Term 2 Jan. 14 Wed. 1845-2145
12 weeks 1.0 Unit

42.900 STATICS

This course covers the same material as in 42.103 Statics but at a slower rate, to suit the student who needs more personal attention or has not taken the math prerequisite in recent years. During the term four extra sessions will be scheduled on evenings to suit the group.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks (16 sessions) 1.0 Unit



42.901 STRUCTURAL ANALYSIS

Prerequisite: 42.205 Strength of Materials or permission of the instructor

This course is designed to provide the student with a basic understanding of the behavior of simple structures and the methods used in their analysis.

Outline: review of prerequisite courses; force diagrams, for pinjointed frames; deflection of trusses using Williot Diagram; differences between statically determinate and statically indeterminate structures; methods of moment area and superposition as applied to slope and deflection; shear force and bending moment diagrams for beams and frames as derived from the method of moment distribution; influence lines as applied to statically determinate beams and trusses; portal frames including the effects of sideways; a brief introduction to computer methods.

During the term four extra problem-solving sessions will be scheduled on evenings suitable to the students.

Text: Structural Analysis; J.C. McCormack; Intext

Term 1 Sept. 10 Wed. 1845-2145
12 weeks (16 sessions) 1.0 Units

42.902 STRUCTURAL DESIGN IN STEEL AND TIMBER

Prerequisite: 42.901 Structural Analysis

This course will provide a good basic knowledge of structural design in steel and timber for people working in the design field.

At the end of the course students should be capable of designing any simple structure in steel and timber.

Outline: loading, types and assumptions; flexure; shear and deflection; tension members, compression members; beams, girders and columns; simple connections, moment connections, trusses and frames; bearing and base plates; new concepts.

Text: Limits States Design in Structural Steel (Metric); Adams, Crantz, Kulah; Canadian Institute of Steel Construction

Term 2 Jan. 13 Tue. 1845-2145
18 weeks 1.5 Unit

42.903 STRUCTURAL DESIGN IN REINFORCED CONCRETE

Prerequisite: 42.901 Structural Analysis

This course will provide a good basic knowledge of structural design in reinforced concrete for individuals working in the design field.

After completing the course students should be capable of designing any simple structure in reinforced concrete using the ultimate strength design method.

Outline: bending and shear in reinforced concrete; simple beams and one-way slabs, compressive reinforcement, tee-beams; two-way slabs, columns, concentric and eccentric loading; footings, retaining walls; introduction to simple prestressed concrete beams.

Term 2 Jan. 14 Wed. 1845-2145
18 weeks 1.5 Units

42.905 SOIL MECHANICS 1

This course will introduce some of the basic principles of soil mechanics and soil-testing procedures to people in the engineering and construction field who have little or no theoretical or laboratory testing experience.

Successful completion of the course should enable the student to conduct and calculate the results of the basic soil mechanics laboratory tests; to have an appreciation and working knowledge of soil mechanics terminology and its basic principles, and to be able to perform the duties of a junior employee in a commercial soil-testing laboratory.

Outline: Lectures and laboratory sessions will present the following topics: the classification of soils; simple soil weight-volume relationships; soil shear strength; soil permeability; soil compressibility; permeability tests; shear strength tests; consolidation tests.

This class will be limited to 20 students.

Text: Introductory Soil Mechanics and Foundations: Geotechnical Engineering (4th edition); G. Sowers

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

42.906 SOIL MECHANICS 2

Prerequisite: 42.905 Soil Mechanics 1

Students will apply the basic principles of soil mechanics to various design situations. The course should give an appreciation of how soil or laboratory testing experience.

Successful completion of the course should enable the student to conduct and calculate the results of the basic soil mechanics laboratory tests; to have an appreciation and working knowledge of soil mechanics terminology and its basic principles, and to be able to perform the duties of a junior employee in a commercial soil-testing laboratory.

Outline: Lectures and laboratory sessions will present the following topics: the classification properties and principles influence design and construction. The intention is to relate the importance of laboratory and field procedures in determining the final design as well as the understanding of some of the more common design procedures.

On successful completion of the course the student should have a better understanding of how field and laboratory inspection and testing influence design and hence should be able to conduct these activities more effectively. The successful student will have the ability to perform and check simple design calculations.

Outline: The course, consisting of lectures, discussions, and design projects will present :seepage analysis, slope stability, earth pressures, earth-retaining structures and foundation design.

This class will be limited to 20 students.

Text: Introductory Soil Mechanics and Foundations: Geotechnical Engineering (4th edition); G. Sowers

Term 2 Jan. 12 Mon. 1845-2145
18 weeks 1.5 Units

42.912 ESTIMATES AND CONTRACTS FOR HEAVY CONSTRUCTION 1

This introductory course will present the basic concepts and techniques of the preparation of estimates and tenders for the construction of civil engineering projects by contract.

On successful completion of the course the student should have a working knowledge of all procedures from the calling for tenders to the award of a contract for a heavy construction job. He should have a working knowledge of the estimating process.

Outline: The course will consist of lectures and the preparation of estimates for basic operations and components of a typical job. Topics include an introduction to the heavy construction industry; contracts and specifications; preparation of estimates; estimate resources; estimates for various types of projects; overhead costs; estimate adjustments; cost accounting and job cost control.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

42.913 ESTIMATES AND CONTRACTS FOR HEAVY CONSTRUCTION 2

Prerequisite: 42.912 Estimates and Contracts for Heavy Construction 1 or permission of the Civil and Structural Technology coordinator

This course will allow students to gain further experience in the preparation of estimates and to consider problems which arise in the administration of contracts for heavy construction jobs.

On successful completion of the course the student will understand the total process of estimating and tendering for a straight-forward heavy construction job and be able to work effectively as a member of an estimating team. He should have an understanding of the types of problems involving claims for additional time and/or money which are the most commonly encountered in heavy construction.

Outline: The course will consist of lectures and the preparation of an estimate for, typically, a highway construction job and possibly a small bridge using SI standards.
Topics include: labour agreements; equipment ownership/rental and operating costs; materials; subcontracts; use of cost reports in preparing estimates; financial and legal aspects and the administration of contracts.

Term 2 Jan. 12 Mon. 1845-2145
12 weeks 1.0 Unit

42.914 TRANSPORTATION ENGINEERING

Prerequisite: 31.914 Technical Report Writing

This course will introduce the principles and theory of transportation engineering to those

wishing to become Civil Engineering technicians or technologists.

On successful completion of the course the student will know the basic concepts of highway engineering including some geometric design theory, and have a general knowledge of transportation systems.

Outline: The course will consist of lectures, problems and mini-projects. Topics include: road classification, cross-section elements, horizontal and vertical alignment, traffic loading, quantity take-off, transportation modes, drainage and the fundamentals of construction methods and equipment for transportation systems.

Texts: Geometric Design Standards for Canadian Roads and Streets; RTAC Handbook of Steel Drainage and Highway Construction Products

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

42.915 HIGHWAY DESIGN AND CONSTRUCTION

Prerequisite: 42.914 Transportation Engineering; 51.540/640 Engineering Surveying; 49.900 Drafting Fundamentals, a working knowledge of engineering materials (soils, asphalt, concrete) or advance approval from the Civil and Structural coordinator

The course is specifically designed to provide civil technicians and technologists with a detailed knowledge of the principles of highway design.

On successful completion of the course students will have the working knowledge to design highways in accordance with RTAC standards. In addition, students will be able to do the calculations for geometry, earthworks, drainage and pavement structure.

Outline: The course will consist of lectures and a design project. Topics include detailed considerations of vertical and horizontal alignment, cross-sections, intersection design, traffic control, drainage, earthwork, mass haul diagrams and various highway construction techniques. Students will be expected to prepare drawings for construction by unit price contract.

Text: Geometric Design Standards for Canadian Roads and Streets; RTAC A guide to the Structural Design of Flexible and Rigid Pavements in Canada

Term 2 Jan. 13 Tue. 1845-2145
18 weeks 1.5 Units

42.916 MUNICIPAL SERVICES

Prerequisite: 42.102 Hydrology; 42.202 Hydraulics; 42.918 Subdivision Planning or and Design or 45.915 Highway Design and Construction should be taken concurrently.

This course will provide an introduction to the various utilities required in any community.

On successful completion of the course the student should have a basic understanding of the function and terminology of the various services, and of the principles governing the design of water supply, sanitary sewer and storm drainage systems. He should have a working knowledge of the layout and design of water and sewer systems.

Outline: The course consists of lectures, discussions and a design project. Topics include determination of flows and design of a water supply distribution system; sanitary and storm sewers; loads on buried conduits; locations of gas and electrical systems; construction practices; procedures for inspection and quality assurance of construction; testing of systems; organizations for operations and maintenance; collection and disposal of solid waste and pollution control regulations.

Term 2 Jan. 15 Thur. 1845-2145
18 weeks 1.5 Units

42.917 COMPUTER METHODS OF STRUCTURAL ANALYSIS

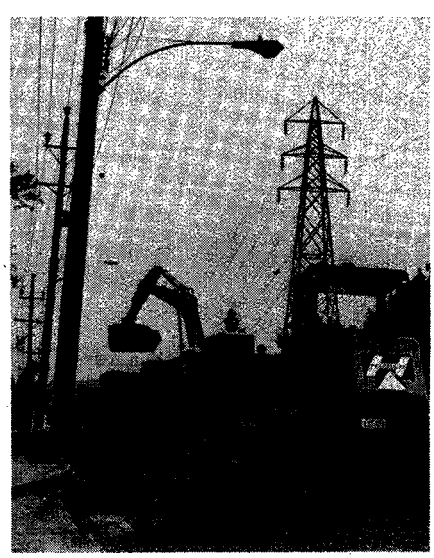
Prerequisite: 42.901 Structural Analysis .A knowledge of FORTRAN and matrix methods is desirable.

This course will introduce the student to computer methods of structural analysis and design, particularly to the stiffness matrix method as applied to plane frames. It will be of interest to students who have taken the prerequisite courses and wish to expand their knowledge of structural analysis, and also to structural engineers whose educational background did not include computer methods.

On completion of the course the student should be able to prepare and input data for frame analysis problems, understand what the computer does with the data, and obtain and interpret the results.

Outline: applicable matrix methods and terminology; development of the stiffness matrix method as applied to the analysis of plane frames; elastic supports; influence lines; temperature stress analysis; three dimensional frames; symmetrical structures; the concept of finite elements; time-sharing systems; job control language, data files, output files; load cases and combinations; the concept of automatic member design.

Term 2 Jan. 15 Thur. 1845-2145
12 weeks 1.0 Unit



42.918 SUBDIVISION PLANNING AND DESIGN

Prerequisites: 42.914 Transportation Engineering; 51.540/640 Engineering Surveying; 49.900 Drafting Fundamentals; and a working knowledge of engineering materials (soils, asphalt, concrete) or advance approval of the Civil and Structural Technology coordinator.

This course is specifically designed to provide civil technicians and technologists with a detailed knowledge of the principles of urban subdivision planning and design of major and minor streets. On successful completion of the course the student will have a working knowledge of subdivision layout, and of the design of the local streets within that subdivision in accordance with the RTAC standards. In addition students will be able to calculate density loading, geometry, moving crown, curb return "stretch outs", intersection design and pavement structure.

Outline: The course will consist of lectures, discussions and a design project. It will include detailed considerations of these topics: drainage, frontage roads, greenbelts, curb and gutters; pavement design, street configuration (cul de sac, loop and crescent) procedure for inspection and quality assurance of construction. Students will be expected to prepare tender documents for construction by unit price or resident improvement contract.

Text: Geometric Design Standards for Canadian Roads and Streets; RTAC

Term 2 Jan. 13 Tue. 1845-2145
18 weeks 1.5 Units

42.920 INTRODUCTION TO URBAN TRAFFIC ENGINEERING

This course is designed to introduce basic traffic enginering concepts. In general, traffic engineering entails the study of the movement and storage of vehicles on road systems. The topics covered should be of particular interest to persons involved in municipal and highway engineering and/or land development.

Outline: the course comprises lecture and assignments. Topics will include driver and vehicle characteristics, traffic stream characteristics, highway and intersection capacity, intersection and parking layout, data collection techniques.

Text: Introduction to Transportation Engineering, Carter and Homburge; Reston

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

42.921 TRAFFIC PLANNING MANAGEMENT

Prerequisite: 42.920 Introduction to Urban Traffic Engineering or approved related experience in this field

This course analyzes methods of applying the basic concepts of traffic engineering introduced in 42.920, Introduction to Urban Traffic Engineering. The course material will be presented by practicing Traffic Engineers from the region.

Outline: The course comprises lectures and a project. Topics will include transportation studies, transportation systems, public transportation, traffic signal design, traffic management techniques and environmental and political aspects of traffic engineering.

Text: Introduction to Transportation Engineering, Carter and Homburge; Reston

Term 2 Jan. 15 Thur. 1845-2145
12 weeks 1.0 Unit

42.922 COMPUTER APPLICATIONS IN CIVIL TECHNOLOGY

This course is designed as an introduction to some applications for computers in Civil Technology. The course will review computer software at present in use in the civil engineering industry.

Outline: The course will comprise lectures, demonstrations and assignments. Topics covered may include applications in highways, survey, soils, hydraulics, traffic, water resources and finite element analysis.

Text: Course handouts

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

Engineering Technician Certificate in Electrical Technology

For entry into advanced level courses without the indicated prerequisite students must receive permission from technology advisors during the week before classes. Pre-entry Mathematics 32.950 or recent Algebra 12 or equivalent is required for this program.

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
43.531 Shop Practice 1	1.5	43.631 Shop Practice 2	1.0		
32.522 Mathematics 1 for Electrical		32.622 Mathematics 1 for Electrical Technology	2.0		
Year 2					
43.501 Circuit Analysis 1		43.601 Circuit Analysis 1	2.0	43.502/602 Circuit Analysis 2	2.5
32.524 Mathematics 2 for Electrical Technology		32.624 Mathematics 2 for Electrical Technology	2.0		
Year 3					
43.504 Electronic Circuits 1		43.604 Electronic Circuits 1	2.0		
32.526 Mathematics 3 for Electrical Technology		32.626 Mathematics 3 for Electrical Technology	2.0		

For students who have completed a first-level certificate, further programs of study leading to senior certificates and diplomas in Electrical Technology may be designed to meet the needs of the individual student.

Programs leading to a National Diploma in Electrical Technology with emphasis in three option areas

Recommended Courses Common to the Three Option Areas		Units
10.131/232	Management in Industry 1 and 2	2.0
31.910	Business & Technical Correspondence	1.0
31.914	Technical Report Writing	1.0
32.522/622	Mathematics 1 for Electrical Technology	2.0
32.524/624	Mathematics 2 for Electrical Technology	2.0
32.526/626	Mathematics 3 for Electrical Technology	2.0
32.528/628	Mathematics 4 for Electrical Technology	2.0
33.508/608	Physics 1	2.0
33.509/609	Physics 2	2.0
43.103	Shop Practice 1	1.5
43.203	Shop Practice 2	1.0
*43.501/601	Circuit Analysis 1	2.0
*43.502/602	Circuit Analysis 2	2.5
43.504/604	Electronic Circuits 1	2.0
43.506/606	Electronic Circuits 2	2.0
43.507/607	Digital Techniques 1	2.0
43.509/609	Measurements	2.0
43.510/610	Industrial Electronics 1	2.0
43.532/632	Digital Techniques 2	2.0
	Units	35.0

*Students with previous training may, with permission of the department, be allowed to take 43.529/629 Electric Circuits (AC/DC)

Power Option

43.505/605	Three Phase Power Circuits	2.5
43.511/611	Electrical Equipment 1	2.0
43.512/612	Protective Devices and Systems	2.0
43.519/619	Electrical Equipment 2	2.0
43.520/620	Electrical Drafting	2.0
43.521/621	Power System Analysis	2.5
43.523/623	Industrial Distribution System	2.0
43.524/624	Lighting Layouts	2.0
43.530/630	Laplace Transform Methods for Electrical Technology	2.0
Suitable approved electives such as:		
43.530/630, 43.522/622, 43.516/616		1.0
	Units	20.0
	Total Units	55.0

Control Electronics Option

32.530/630	Laplace Transform Methods for Electrical Technology	2.0
43.414	Industrial Audio Systems	1.0
43.508/608	Telecommunication Circuits	2.0
43.515/615	Electronics Circuits 3	2.0
43.516/616	Digital Computer Systems	2.5
43.518/618	Circuit Design & Fabrication	2.0
43.535/635	Electronic Fabrication	2.0
Suitable approved electives such as:		
43.505/605, 43.511/611, 43.519/619, 43.530/630		6.5
	Units	20.0
	Total Units	55.0

Telecommunication Electronics Option

32.530/630	Laplace Transform Methods for Electrical Technology	2.0
43.508/608	Telecommunication Circuits	2.0
43.513/613	Microwave Principles & Devices	2.0
43.515/615	Electronics Circuits 3	2.0
43.516/616	Digital Computer Systems	2.5
43.517/617	Telecommunication Systems	2.0
43.518/618	Circuit Design & Fabrication	2.0
43.535/635	Electronic Fabrication	2.0
Suitable approved electives		3.5
	Units	20.0
	Total Units	55.0

The above programs may be modified to suit individual needs but changes must be approved in writing. On completion of at least 30 units of approved course credit, a student may apply for the Senior Engineering Technician Certificate in Electrical Technology.

43.103 SHOP PRACTICE 1

This course will introduce the student to the basic discrete passive components used in electronics and to the techniques of layout and fabrication of electronic equipment. Upon successful completion of this course the student should have a good understanding of the characteristics of components used in electronic equipment and the steps involved in fabricating the hardware, including drafting, printed circuit layout, and sheetmetal work.

Outline: resistors, capacitors, inductors, basic transformers, switches, relays, colour codes, tolerances, preferred values, power and voltage ratings, wiring, soldering, printed circuit layout, electrical and mechanical drafting, sheet metal fabrication.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks

continues:

Term 2 Jan. 15 Thur. 1845-2145
6 weeks 1.5 Units

43.203 SHOP PRACTICE 2

Prerequisite: None, but it is suggested that this course be taken immediately after 43.103 Shop Practice 1

The course will familiarize the student through practical, "hands on" training, with basic wiring practices and principles. Upon successful completion of this course the student will have an understanding of basic residential, commercial and industrial code requirements. The vehicle used to obtain these skills will be residential wiring.

Outline: building a miniature frame construction wall using common power tools; installing wiring devices such as lamps, switches, receptacles, and panels; familiarization with conduit fittings and bending techniques; low voltage wiring, insulation selection, and testing; basic lighting layout and load grouping.

Note: This course will start after Shop Practice 1 is completed in Term 2.

Term 2 Feb. 26 Thur. 1845-2145
12 weeks 1.0 Unit

43.413 INDUSTRIAL AUDIO SYSTEMS

Prerequisite: 32.522/622 Math 1 for Electrical Technology or permission of instructor

This course is for the electronics engineering student or technician who is interested in the science of sound and its applications. Emphasis is on the fundamental application of acoustics.

Successful students will learn a systematic method of installing a sound reinforcement system in an existing auditorium and be able to suggest methods of improving an unsatisfactory sound system.

Outline: application of audio systems in industry, the decibel system and volume units, outdoor sound systems, transducers (loud speakers, microphones), indoor sound reinforcement systems, system equilization and design applications.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

43.501/601 CIRCUIT ANALYSIS 1 (43.102 Day School)

Prerequisites: Algebra 12 and Physics 11 or equivalent, or permission of the instructor

This course will introduce the basic principles of DC circuit analysis through classroom lectures and practical laboratory sessions. Upon successful completion the student will be able to analyze circuits containing resistance elements and supplies from direct current voltage or current sources. The student will be able to use basic-direct current electrical equipment such as power supplies and multimeters.

Outline: The basic concepts of energy, work, current, voltage, resistance and power are thoroughly covered initially, proceeding to the analysis of series, parallel and series-parallel circuits utilizing circuit laws and techniques. The final portion of the course deals with techniques utilizing network theorems to analyze direct-current, resistive networks.

Text: "Electric Circuits for Engineering Technology", Ridsdale, Chapt. 1-7 inclusive.

Term 1 Sept. 8 Mon. 1845-2145
Sept. 10 Wed. 1845-2145
12 weeks

continues:

Term 2 Jan. 12 Mon. 1845-2145
Jan. 14 Wed. 1845-2145
12 weeks 2.0 Units

43.502/602 CIRCUIT ANALYSIS 2 (43.202 Day School)

Prerequisites: 43.501/601 Circuit Analysis 1, and 32.522/622 Math 1 for Electrical Technology

This course will introduce students to the behavior of electrical circuits and networks when driven by a single-phase alternating current (AC) source and prepares the student for courses in electronics and power systems.

Outline: the sine wave, average and effective values, power and power factor; resistance, capacitance, and inducatance as elements in single-phase AC circuits; phasor diagrams, impedance, admittance, voltage, current and power diagrams, analysis of AC circuits with complex algebra; resonance and resonant circuits, high and low pass filters; the application of circuit laws and theorems to single-phase AC circuits, the analysis of two-port networks; coupled circuits.

The circuit theory from lectures will be verified with many projects conducted in well-equipped laboratories using the following equipment: multimeters, sine wave generators, amplifiers, and dual trace oscilloscopes.

Text: "Electric Circuits for Engineering Technology", Ridsdale, Chapt. 1-7 inclusive.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks

continues:

Term 2 Jan. 13 Tue. 1845-2145
18 weeks 2.5 Units

43.504/604 ELECTRONIC CIRCUITS 1

Prerequisite: 43.502/602 Circuit Analysis 2 or 43.529/629 Electric Circuits AC/DC or approved equivalent

This course is a prerequisite for higher level electronics courses and 43.507/607 Digital Techniques 1.
Successful students will obtain a basic knowledge of transistor theory and its application in electronic circuits.

Outline: basic theory of operation of the P-N junction and the junction transistor; characteristic curves and their interpretation; basic amplifier configurations and properties; load-line analysis; choice of Q-point; the transistor as a switch; bias circuit choice, design and analysis; AC equivalent circuits and their uses; frequency response considerations; power supplies, including rectification, filtering, and voltage and current regulation; feedback principles, leading to oscillation and oscillators. About one-third of the course time is spent in well-equipped laboratories verifying theory and testing circuit designs.

Text: "Electronic Devices and Circuit Theory"; Boylestad & Nashelsky; Prentice-Hall

Term 1 Sept. 10 Wed. 1845-2145
12 weeks

continues:

Term 2 Jan. 14 Wed. 1845-2145
12 weeks 2.0 Units

43.505/605 THREE-PHASE POWER CIRCUITS (43.323 Day School)

Prerequisite: 43.502/602 Circuit Analysis 2 or 43.529/629 Electric Circuits AC/DC or approved equivalent

This course will further develop the electrical knowledge of persons involved directly or indirectly with the electrical power industry.

After completing this course successfully students will be able to analyze three-phase electrical power circuits and determine their behavior under normal operating conditions. This course is a highly desirable prerequisite for all further electrical equipment, industrial electronics, and electrical power courses.

Outline: The course includes laboratory sessions, in well-equipped laboratories to study the behavior of electrical quantities. Topics include: review of single-phase AC circuits, with emphasis on graphical analysis, with respect to circuit quantities, electrical load, and power-factor correction. Other topics include single-phase two and three-wire distribution, elementary transmission-line problems and corresponding voltage regulation, three-phase balanced and unbalanced systems, phase sequence determination, two wattmeter methods for power measurement, three-phase transformer connections and third harmonics.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks

continues:

Term 2 Jan. 12 Mon. 1845-2145
18 weeks 2.5 Units

43.506/606 ELECTRONIC CIRCUITS 2

Prerequisite: 43.504/604 Electronic Circuits 1

This course is a continuation of Electronic Circuits 1. It gives the student an understanding of transistor circuits not included in the previous course and the theory and application of other solid state devices.

Outline: tuned amplifiers; push-pull power amplifiers; transformerless power amplifiers; the UJT, PUT and the thyristor family; single-phase power control using the SCR and triac; field-effect transistors; integrated circuits with emphasis on linear circuits; the operational amplifier; heat-sink calculations; small-signal analysis. About one-third of the course time is spent in our well-equipped laboratories verifying theory and testing circuit designs.

Text: "Electronic Devices and Circuit Theory"; Boylestad & Nashelsky; Prentice-Hall

Term 1 Sept. 8 Mon. 1845-2145
12 weeks

continues:

Term 2 Jan. 12 Mon. 1845-2145
12 weeks 2.0 Units

43.507/607 DIGITAL TECHNIQUES 1

Prerequisite: 43.504/604 Electronic Circuits 1. Admission will be restricted to those with the prerequisite or by successful completion of a test to be held on the first night of class.

This course will allow persons who have a thorough knowledge of solid state electronics to become proficient in the rapidly developing and expanding field of digital electronics. On successful completion the student will also be prepared for more advanced courses in digital techniques.

Outline: The course is presented in lecture form with laboratory sessions introduced at appropriate intervals. Topics include number systems; Boolean algebra and symbolic logic; AND, OR, NOR and NAND circuits and their application; switching circuit analysis and synthesis; flip flops and flip flop applications; serial and parallel counting systems; decoding and encoding systems; ring counters and shift registers; adder circuits; complement arithmetic; and practical applications of digital techniques.

Text: "The TTL Data Book for Engineers", Texas Instruments Inc.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks

continues:

Term 2 Jan. 13 Tue. 1845-2145
12 weeks 2.0 Units

43.508/608 TELECOMMUNICATIONS CIRCUITS

Prerequisites: 43.502/602 Circuit Analysis 2 or 43.529/629 Circuit Analysis AC/DC and 43.506/606 Electronic Circuits 2.

This course introduces principles which form the basis of all telecommunications systems for persons employed at the basic installation and service level. Students should already understand electrical and electronic fundamentals and be familiar with the use of lab equipment, especially of oscilloscopes.

Upon successful completion of this course students will understand basic types of modulation, demodulation, frequency generation and frequency selection techniques, and be able to analyze these circuits for troubleshooting. This course serves as preparation for 43.513/613 Microwave Principles and 43.517/617 Telecommunication Systems.

Outline: Lecture and practical lab sessions cover the following topics: specialized circuits for modulation, demodulation (AM, SSB, FM, PM), frequency generation and frequency selection techniques as used in radio and telephone equipment.

Text: "Electronic Communication Systems"; Kennedy; McGraw-Hill

Term 1 Sept. 10 Wed. 1845-2145
12 weeks

continues:

Term 2 Jan. 14 Wed. 1845-2145
12 weeks 2.0 Units

43.509/609 MEASUREMENTS (43.204 Day School)

Prerequisite: 43.502/602 Circuit Analysis 2 or 43.529/629 Circuit Analysis AC/DC and 43.504/604 Electronic Circuits 1

This course will instruct the student who already has a knowledge of basic electronic principles in the selection, operation, and typical methods of using the basic electronic test instruments. This course will aid in "getting the most out of a test instrument" in day-to-day situations.

Upon successful completion of this course students will understand how measurement techniques currently in use may be improved.

Outline: theory of operation and measurement techniques using various types of bridges, distortion analyzers, electronic voltmeters, frequency counters, oscilloscopes, RF power meters, signal generators, spectrum analyzers, and Q-meters. Certain specialized techniques dealing with measurement of phase angle, power and distortion will also be presented.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks

continues:

Term 2 Jan. 14 Wed. 1845-2145
12 weeks 2.0 Units

43.510/610 INDUSTRIAL ELECTRONICS 1

Prerequisite: 43.506/606 Electronic Circuits 2

This course covers basic power control circuits for the electronics student and provides the fundamentals for electrical power students who will continue to 43.530/630 Industrial Electronics 2.

On successful completion of the course a student will understand the operation of these circuits and be able to construct and to troubleshoot them using test equipment. The student will also be able to interpret circuit schematics and calculate circuit values.

Outline: Eight laboratory sessions and 16 lecture/problem sessions cover these topics: DC power supplies and regulators; inverters; SCR switching; TRIAC phase control; and switches, fuses and timing device applications.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks

continues:

Term 2 Jan. 13 Tue. 1845-2145
12 weeks 2.0 Units

43.511/611 ELECTRICAL EQUIPMENT 1 (43.324 Day School)

Prerequisite: 43.505/605 Three Phase Power Circuits or approved equivalent.

This course will allow people with an electrical circuit fundamentals background to study the theory, characteristics, and operations of DC generators and motors, transformers, and AC induction motors. Electricians, technicians, and draftsmen will find this course useful in understanding the basic electrical equipment with which they work so frequently. It is a mandatory prerequisite to 43.519/619 Electrical Equipment 2 and 43.523/623 Industrial Distribution Systems.

Successful students will learn the theory of operation, the application and the limitations of each basic type of electrical equipment listed. Also they will gain experience in the

connecting, operating and testing of the equipment.

Outline: DC machines, voltage generation and regulation, torque and speed relationships, typical wiring connections; transformers, voltage regulation and efficiency; AC induction motors, operation and characteristics including inrush current, efficiency, and starting torque. Approximately 50% of the course is spent in running the equipment in the lab.

This course may be offered in 1981/82.

43.512/612 PROTECTIVE DEVICES AND SYSTEMS (43.425 Day School)

Prerequisite: 43.511/611 Electrical Equipment 1, and 43.505/605 Three Phase Power Circuits, or permission of the instructor

This course will allow students with an electrical circuits background to study protective devices such as fuses, circuit-breakers, protective relays, current and potential transformers and lightning-arresters. Electricians, technicians, and draftsmen will find this course useful in understanding the functions and limitations of the basic protective devices with which they work so frequently, and to compare devices, and plan the coordination between them.

Outline: The 24 sessions will consist of approximately 50 percent lectures and 50 percent laboratory and problem sessions. Topics to be discussed are the need for protection, fuses, circuit breakers, coordination of fuses and circuit breakers, protective relays, current and potential transformers, and lightning arresters, coordination between feeder protection and motor-overload relays; and coordination between transformer primary fuse and secondary circuit breaker.

This course may be offered in 1981/82.

43.513/613 MICROWAVE PRINCIPLES AND DEVICES

Prerequisite: 43.506/606 Electronic Circuits 2. 43.508/608 Telecommunications Circuits is desirable but may be taken concurrently

This course provides an introduction to microwave principles and devices most frequently encountered in communications, radar, and industrial systems for persons associated with the electronics industry, and with little or no experience in high-frequency techniques. On successful completion of this course a student will be knowledgeable of the operation of most microwave appliances or devices used in industry. Also, the principles and techniques acquired will be a valuable background for further specialized training in the field of microwave communications.

Outline: transmission line characteristics and the ideal lossless line; Smith Chart and graphical representation of the transmission line; wave guides, coupling tees, attenuators, and terminations, directional couplers, detectors, cavities, wave-meters; typical single-channel microwave systems such as would be used in commercial systems.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks

continues:

Term 2 Jan. 12 Mon. 1845-2145
12 weeks 2.0 Units

43.515/615 ELECTRONIC CIRCUITS 3

Prerequisite: 43.506/606 Electronic Circuits 2 or permission of instructor

This course introduces the electronics student to solid state switching circuits using both transistors and CMOS integrated circuits. Circuit analysis, construction and testing in the laboratory is emphasized. On completion the successful student will be able to utilize specific devices in practical applications and to quantitatively predict their performance and operating waveforms.

Outline: pulse characteristics, transistor switch, analog switch, loading effects, ramp generator, Schmitt trigger, monostable (one shot), astable (clock oscillator), flip flop and the 555 timer. Approximately 70 percent of the course is devoted to integrated circuits utilization and 30 percent to transistor circuits. 10 laboratory sessions involve circuit construction and evaluation.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks

continues:

Term 2 Jan. 15 Thur. 1845-2145
12 weeks 2.0 Units

43.516/616 DIGITAL COMPUTER SYSTEMS

Prerequisite: 43.532/632 Digital Techniques 2. Admission will be restricted to those with the prerequisite, or by successful completion of a test to be held on the first night of class.

This course will allow persons with a knowledge of solid state electronics and digital techniques to become familiar with small digital computers and their industrial applications. On successful completion of this course the student will understand the organization and operation of typical small digital computers; be able to interface mini-microcomputers to external systems; be able to write simple programs in ASSEMBLER language to test and operate interfaced devices; and be able to write subroutines in ASSEMBLER language and link them together to form a small system.

Outline: basic machine organization and operation of the digital computer, detailed analysis of digital computer architecture together with machine assembler language programming; interfacing to peripheral devices and industrial systems; creation of a small real time system. This course is presented in a series of lectures plus laboratory projects carried out on 8080 and 6800 microcomputers.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks

Term 2 Jan. 15 Thur. 1845-2145
18 weeks 2.5 Units

43.517/617 TELECOMMUNICATION SYSTEMS

Prerequisite: 43.508/608 Telecommunications Circuits and 43.513/613 Microwave Principles and Devices

This course introduces the principles of transmitting and receiving systems including radio, telephone frequency division and time division multiplex and radio aids to navigation.

Upon successful completion of this course the student will understand circuit arrangements of these systems, be able to carry out system performance tests in accordance with DOC and industrial standards; and be able to lay out a simple radio path predicting operating levels and noise performance.

Outline: principles of electro-magnetic wave propagation and radio path planning; typical transmitters and receivers operating in the AM, SSB, FM and PM modes; frequency division multiplex plans and system organization; PCM multiplex system organization, basic radar, Loran and other selected navigation systems. Laboratory sessions will include radio transceiver evaluations and the layout of a simple radio path.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks

continues:

Term 2 Jan. 15 Thur. 1845-2145
12 weeks 2.0 Units

43.518/618 CIRCUIT DESIGN AND FABRICATION

Prerequisite: 43.506/606 Electronic Circuits 2

This course introduces the student to further applications of transistors and linear integrated circuits.

Outline: The course opens with a review of the fabrication techniques of monolithic integrated circuits and the resulting electrical characteristics of components making up the circuits. It then shows how these characteristics may be used to advantage in the design of hybrid-voltage amplifiers, balanced modulators, phase detectors, broadband amplifiers, and active filters. Approximately half the course time will be spent in the laboratory constructing and testing your prototype circuit design.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks

continues:

Term 2 Jan. 15 Thur. 1845-2145
12 weeks 2.0 Units

43.519/619 ELECTRICAL EQUIPMENT 2 (43.424 Day School)

Prerequisite: 43.511/611 Electrical Equipment 1

This course is a continuation of 43.511/611 Electrical Equipment 1 which must be taken first. (Please read the description of that course.)

Outline: electromagnetic relays, timing devices, contactors, motor starters and related pilot devices, preparation of schematic control

diagrams, synchronous motors and generators, duty cycles, load applications and temperature classifications.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks

continues:

Term 2 Jan. 15 Thur. 1845-2145
12 weeks 2.0 Units

43.520/620 ELECTRICAL DRAFTING

Prerequisites: 49.900 Drafting Fundamentals, 43.519/619 Electrical Equipment 2 and 43.523/623 Industrial Distribution Systems

This course wil allow persons with an electrical equipment background to develop the skills necessary to organize and draft schematic, connection, and electrical layout drawings. It will give the student actual experience in developing and interpreting control schemes involving electromechanical devices; preparing schematic and complete connection diagrams; organizing branch circuit wiring for lighting layouts; and preparing building layout drawings.

Outline: standard electrical symbols, schematic and connection diagrams, single and three line diagrams, building electrical layouts and equipment layout.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks

continues:

Term 2 Jan. 12 Mon. 1845-2145
12 weeks 2.0 Units

43.521/621 ELECTRICAL POWER SYSTEMS ANALYSIS

Prerequisite: 43.505/605 Three Phase Power Circuits

This course will impart further knowledge of three-phase electrical theory by providing an introduction to calculation methods for solving three-phase power system problems, for application in the electrical power industry and electrical consulting engineering offices. It will lead to a better understanding of operation and maintenance problems encountered with electric power equipment.

Outline: graphical analysis methods of voltage regulation; unbalanced three-phase electrical systems with an introduction to symmetrical components; short-circuit studies and per unit methods of solving utility and industrial power system problems; short circuit forces; circuit breaker interrupting ability; maximum momentary duty of power equipment; power cycle diagrams and transmission diagrams to analyze transmission line power handling capabilities; study of power angle diagrams as introduction to power system stability analysis.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks

continues:

Term 2 Jan. 14 Wed. 1845-2145
18 weeks 2.5 Units

43.522/622 UTILITY SYSTEMS (43.425 Day School)

Prerequisites: 43.505/605 Three Phase Power Circuits, 43.519/619 Electrical Equipment 2 and 43.512/612 Protective Devices and Systems, or permission of the instructor

This course is the final course in the area of utility systems. It will bring together the application of all types of electrical equipment, their use in utility systems and utility system organization.

Outline: synchronous generators; generating stations; transmission lines; substation layouts; protection of equipment and systems; and power rate structure. Labs will include paralleling of alternators and transformers, KW and KVAR load sharing.

This course may be offered in 1981/82.

43.523/623 INDUSTRIAL DISTRIBUTION SYSTEMS

Prerequisites: 43.519/619 Electrical Equipment 2; 43.512/612 Protective Devices and Systems; and 43.524/624 Lighting Equipment and Layouts or approved equivalents

This is the final course in the area of industrial distribution systems (as compared to utility distribution systems). The purpose is to bring together the application of all types of electrical equipment with regard to the design of a complete electrical system for an industrial plant or commercial building.

Outline: branch circuit wiring; feeder design; motor branch circuit wiring; motor control centres; demand factors; low-voltage switchboards; unit substations; voltage and system selection; grounding of systems and equipment and system protection.

All relevant types of equipment are briefly discussed (on the basis that the student has had previous exposure to the equipment, followed by system design-type problems which emphasize the selection of specific rating of equipment. All relevant regulations of the Canadian Electrical Code are discussed and applied.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks

continues:

Term 2 Jan. 13 Tue. 1845-2145
12 weeks 2.0 Units

43.524/624 LIGHTING EQUIPMENT AND LAYOUT

Prerequisite: 49.900 Drafting Fundamentals or equivalent

This course will introduce the fundamentals of lighting sources and lighting system design. It will allow the student to perform the necessary calculations in order to layout a lighting system and to design feeders to connect to lighting loads.

Outline: lighting fundamentals, light sources, lighting system calculations, lighting layouts, and feeder calculations.

This course may be offered in 1981/82.

43.529/629 ELECTRIC CIRCUITS AC/DC

Note: This course is an accelerated program: demanding and dependent upon a strong mathematics background. A special mathematics course will be instituted in the sixth week after classes start to complement this course. See 32.540/640 Mathematics for Electrical Technology. THIS PROGRAM IS NOT INTENDED FOR SOMEONE WITHOUT PREVIOUS TRAINING IN ELECTRICAL THEORY.

Students are required to obtain approval from department coordinator or authorization from an instructor of 43.501/601 Circuit Analysis 1, before being allowed to register for this course.

This course will enable persons with a strong background in the electrical industry or with some college or university training to cover and/or review those topics necessary to take the more advanced courses in the Electrical Program. It gives students the basic knowledge of how single phase AC and DC circuits work and how to analyze and design them for particular situations.

Outline: see 43.501/601 Circuit Analysis 1 and 43.502/602 Circuit Analysis 2.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks

continues:

Term 2 Jan. 15 Thur. 1845-2145
18 weeks 4.0 Units

43.530/630 INDUSTRIAL ELECTRONICS 2

Prerequisites: 43.510/610 Industrial Electronics 1; 43.511/611 and 43.519/619 Electrical Equipment 1 and 2; and 32.530/630 Laplace Transforms, or permission of the instructor

Students will study the application of electronics and feed-back theory to the analogue control of electrical machinery.

Outline: Equal emphasis will be placed on lecture/problem sessions and practical lab work using a variety of standard industrial drive units. Topics include: transfer functions, block diagrams, analysis of steady state and transient performance of systems, application of feedback to machine control systems such as speed regulators, voltage regulators and current regulators.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks

continues:

Term 2 Jan. 13 Tue. 1845-2145
12 weeks 2.0 Units

43.532/632 DIGITAL TECHNIQUES 2

Prerequisites: 43.507/607 Digital Techniques 1 and 43.506/606 Electronic Circuits 2. Admission is restricted to those with the prerequisites, or by successful completion of an entrance examination to be held on the first night of class.

This course will allow persons with a knowledge of solid state electronics and basic digi-

tal techniques to become familiar with digital subsystems and their applications to industry. Upon successful completion of this course the students will be able to use MSI and LSI devices to implement, analyze and troubleshoot digital subsystems.

Outline: the theory and application of MOS, CMOS, Schottky, ECL logic, frequency sources, frequency and time measurement, digital to analog and analog to digital conversion using complex techniques; analog and digital multiplexing; basic memories and their organization; arithmetic systems; error checking codes and systems, digital computer organization, digital circuit layout and troubleshooting techniques.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks

continues:

Term 2 Jan. 14 Wed. 1845-2145
12 weeks 2.0 Units

43.535/635 ELECTRONIC FABRICATION

Prerequisite: 43.504/604 Electronic Circuits 1 or equivalent or approval of the instructor. Students must be able to read an electronic circuit diagram.

This course will enable those students wishing to further their knowledge in the electronics industry to take a circuit from the schematic stage and turn it into a finished project, using standard industrial techniques. Upon successful completion of the course students will be able to: a) design and fabricate single and double sided printed circuit boards using wet and dry film techniques; and b) design and fabricate electronic equipment incorporating printed circuitry and packaging in prototype form.

Outline: layout design of single and double sided printed circuit boards, components, component mounting, artwork, production processes, interconnection of units, prototype design and assembly, high reliability soldering techniques, copper foil specifications, troubleshooting, and production scheduling.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks

continues:

Term 2 Jan. 12 Mon. 1845-2145
12 weeks 2.0 Units

43.540/640 PROCESS COMPUTER SYSTEMS

Prerequisite: 43.516/616 Digital Computer Systems or equivalent and some knowledge of "BASIC". Enrolment will be limited to 20 persons. Whether this course runs or not is subject to the availability of equipment.

This course introduces students to the application of mini and microcomputer hardware and software techniques to real time data acquisition and process control.

On successful completion of this course the student will be able to write real time input/output and control programs in "BASIC" language with consideration of scan rate, accuracy, filtering, alarm limits, etc.; be able to write simple graphic display programs for monitoring of real time events; be able to specify and/or design typical I/O and multiplexing circuitry for either analog or digital signals paying attention to linearity, isolation, stability, etc.; be able to write assembler language real time input/output handlers which are time driven, event driven etc.; and assess the application of various machines, modules and languages to various control requirements.

Outline: design and construction of typical interface circuitry and interaction of the same with PDP-11 based control systems.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks

continues:

Term 2 Jan. 13 Tue. 1845-2145
12 weeks 2.0 Units

43.927 PRINTED CIRCUITS

Prerequisite: Students applying for this course must be able to read a schematic diagram.

With no previous experience successful students will be able to manufacture a simple printed circuit after a few hours. This course introduces effective methods of printed circuit layout and fabrication. On successful completion of the course a student will have sufficient knowledge to make any circuit except those of very intricate and close tolerances. Those wanting to further their knowledge in this area should take 43.535/635 Electronic Fabrication.

Outline: printed circuit board layout, physical and electrical clearances; direct etch method; photographic etch method; and silk screen method.

This class will be limited to 20 students. There are no units of credit granted for this course.

Term 1 Sept. 9 Tue. 1845-2145
Oct. 21 Tue. 1845-2145
6 weeks

begins again:

Term 2 Jan. 12 Mon. 1845-2145

INSTRUMENTATION
AUTOMATION AND CONTROL SYSTEMS

Engineering Technician
Certificate in Instrumentation

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
48.511 Process Instruments 1		48.611 Process Instruments 1	2.0	32.903 Trigonometry	1.0
32.901 Algebra 2	1.0	32.902 Logarithms and Analytic Geometry	1.0		
Year 2					
48.512 Process Instruments 2		48.612 Process Instruments 2	2.0	43.502/602 Circuit Analysis 2	2.5
43.501 Circuit Analysis 1		43.601 Circuit Analysis 1	2.0		
Year 3					
48.517 Process Control 1		48.617 Process Control 1	2.0		
43.504 Electronic Circuits 1		43.604 Electronic Circuits 1	2.0		

Suggested Electives

The following electives are applicable to Senior Engineering Technician Certificate and National Diploma of Technology.

		Units
10.904	Supervisory Skills	1.0
30.902/903	Chemical Principles 1 and 2	5.0
31.914	Technical Report Writing	1.0
31.910	Business and Technical Correspondence	1.0
32.931	Calculus 1	2.0
32.932	Calculus 2	2.0
33.508/608	Physics 1	2.0
33.509/609	Physics 2	2.0
43.507/607	Digital Techniques 1	2.0
43.532/632	Digital Techniques 2	2.0
43.516/616	Digital Computer Systems	2.5
43.540/640	Process Computer Systems	2.0
48.513/613	Process Instruments 3	2.0
48.518/618	Process Control 2	2.0
48.912	Measurement Electronics	1.0
48.932	Electronic Signal Conditioning Methods in Instrumentation	1.0
48.933	Electronic Controllers	1.0
49.900	Drafting Fundamentals	1.0
49.903	Mechanical Drafting 1	1.5
49.932	Engineering Economics	1.0

48.511/611 PROCESS INSTRUMENTS 1

This course will allow persons with little or no experience to learn the fundamentals of industrial instrumentation and to prepare for more advanced courses. In addition to the terminology and symbols the participants will study the principles and characteristics of commercial instruments used to measure variables such as density of fluids, pressure in vessels, levels in tanks, and flows in pipes and ducts.

On successful completion of this course the student will be able to perform routine instrument calibrations, understand the principles of their operation, and be familiar with standard calculations relating to the variables studied.

Outline: The course will consist of a series of lectures explaining how instruments work, the solution of typical instrumentation problems, as well as laboratory sessions working with commercial instruments.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks

continues:

Term 2 Jan. 13 Tue. 1845-2145
12 weeks 2.0 Units

48.512/612 PROCESS INSTRUMENTS 2

Prerequisite: 48.511/611 Process Instruments 1

This course is a continuation of Process Instruments, and covers the principles and application of methods of measurement of temperature, humidity, dew point, pH and oxygen.

On successful completion of this course the student will be able to identify and select appropriate instruments for process measurements. The student will also be able to calibrate instruments and perform calculations pertaining to measurement applications.

Outline: This course consists of lectures, problem solving assignments, and laboratory sessions working with commercial instruments.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks

continues:

Term 2 Jan. 13 Tue. 1845-2145
12 weeks 2.0 Units

48.513/613 PROCESS INSTRUMENTS 3

Prerequisite: 48.512/612 Process Instruments 2 or permission of instructor

This course is a continuation of Process Instruments 1 and 2. Topics covered include measurement of electrolytic conductivity, basic spectrometry and typical spectrometer alignments, basic chromatography and chromatograph operating principles.

Successful completion of this course will indicate an understanding of the several methods of measurement covered and a familiarity with typical equipment used in those measurements. Though not a prime aim of this course, fault finding and correction will also be covered.

Outline: The course will consist of lectures, demonstrations and problem solving assignments and discussions, together with laboratory experiments reinforcing and expanding the class presentations. Most work is with commercial/industrial equipment.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks

continues:

Term 2 Jan. 13 Tue. 1845-2145
12 weeks 2.0 Units

48.517/617 PROCESS CONTROL 1

Prerequisite: 48.512/612 Process Instruments 2.

Introduction to the basic principles and practices common to many types of Automatic Process Control Systems.

On satisfactory completion the student will be able to: use and interpret Instrument Society of American Symbols, component diagrams, and system diagrams; calibrate, troubleshoot, and analyze the response of various industrial control components; apply basic feedback theory to Electronic, Pneumatic and Hydraulic Control Systems; design and construct a single variable control system using standard industrial process control components.

Outline: lectures, demonstrations and laboratory exercises present the following topics: basic automatic control principles; feedback circuit design principles in devices and systems; block diagrams and transfer functions; pneumatic and hydraulic amplifier circuits applied to transmitters, signal converters, power amplifiers; computing circuits and position servomechanisms; final control elements; control valve characteristics, specification and sizing.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks

continues:

Term 2 Jan. 14 Wed. 1845-2145
12 weeks 2.0 Units.

48.518/618 PROCESS CONTROL 2

Prerequisite: 48.517/617 Process Control 1

This course introduces the student to the principles and practices used in the design, operation and application of common industrial process control systems.

On satisfactory completion the student will be able to use and interpret system schematics and flow diagrams; calculate, analyze and adjust the response of various control circuits and systems; apply feedback and feedforward concepts to various industrial control systems; design and construct multi-variable process control systems using standard industrial control components and computer software.

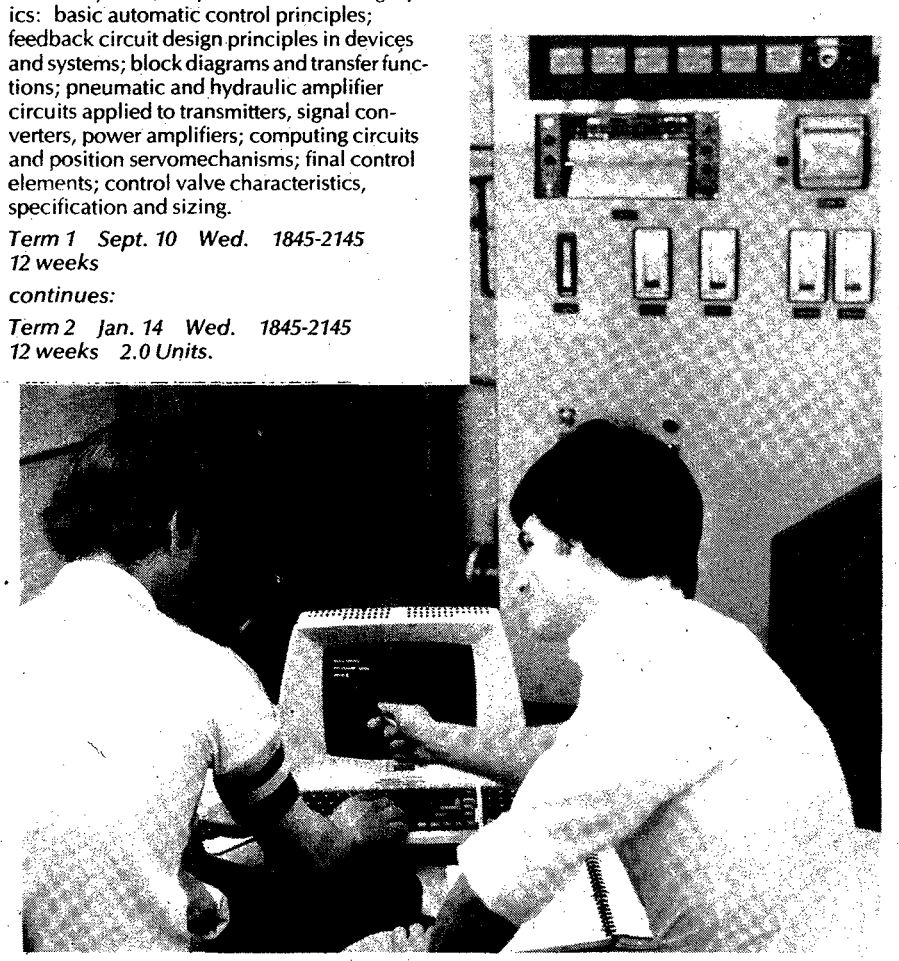
Outline: closed loop system stability and damping; controller circuits for proportional, reset, and rate modes; process control strategies including ratio, cascade, feedforward plus feedback, and total feedforward control; introduction to computer process control.

This course will consist of lectures, demonstrations, and laboratory exercises working with manufacturers' pneumatic and electronic control equipment applied to steam and liquid processes.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks

continues:

Term 2 Jan. 12 Mon. 1845-2145
12 weeks 2.0 Units



48.912 MEASUREMENT ELECTRONICS

Prerequisite: 43.504/604 Electronic Circuits 1 or approved equivalent. No prior knowledge of operational amplifiers is required.

This course is directed towards personnel involved with commercial or industrial instrumentation and familiarizes the student with the electronic circuitry basic to scientific and industrial measurement transducers.

On successful completion of this course the student will be able to specify the correct circuitry to be used in conjunction with measurement transducers such as strain gauges, temperature sensors, conductivity probes, ion concentration probes, and flow meters in the measurement of level, pressure, flow, temperature, conductivity, etc. Students will be able to use operational amplifiers for the design and construction of various instrumentation amplifier circuits given specific requirements for gain, linearity, stability and CMRR or select the correct commercially-available module if applicable. Students will also be able to describe the circuitry used in many commercial measurement devices by analysis of schematic diagrams.

Outline: design and application of bridge circuits for various measurement transducers; use of operational amplifiers for amplification of low level DC signals, and "hands on" analysis of various manufacturers' measurement amplifier circuitry.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

48.922 ELECTRONIC SIGNAL CONDITIONING METHODS IN INSTRUMENTATION

Prerequisite: 43.506/606 Electronic Circuits 2 or 48.912 Measurement Electronics

This course is a continuation of Measurement Electronics and acquaints students with methods of electronic signal transmission and conditioning in the process control loop.

On successful completion of the course, the student will be able to design simple current to voltage and voltage to current convertors using op-amps, and analyze and troubleshoot typical industrial two wire transmitters. Students will also be able to apply operational amplifiers to analog signal conditioning circuits such as summers, DFG's, multipliers, square and square root units, limiters, comparators, etc. and be conversant with industrial modules available.

Outline: The course will emphasize the practical approach by concentrating on typical industrial appliations and problems in both lectures and laboratories.

Term 2 Jan. 12 Mon. 1845-2145
12 weeks 1.0 Unit

48.933 ELECTRONIC CONTROLLERS

Prerequisite: 48.922 Electronic Signal Conditioning or 43.506/606 Electronic Circuits 2 or approved equivalent

This course is a continuation from Electronic Signal Conditioning and familiarizes the student with the design objective and circuitry common to industrial electronic controllers.

On successful completion of the course students will be able to design and implement simple two and three mode controllers using operational amplifiers in configurations commonly used in commercial equipment. They will be able to discuss various design configurations used for obtaining bumpless transfer between modes, and identify methods used by the analysis of various manufacturers' schematics.

Students will be conversant with the requirements for analog back-up in computer base control systems and be able to describe the operation and interface requirements for typical Computer/Manual and Computer/Auto/Manual stations.

Term 3 Apr. 6 Mon. 1845-2145
12 weeks 1.0 Unit

Engineering Technician Certificate in Forest Resources Technology

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
32.901 Algebra 2	1.0	45.903 Forest Land Management	1.5	32.903 Trigonometry	1.0
45.501 Forest Measurements 1	1.0	45.601 Forest Measurements 1	1.0		
Year 2					
31.910 Business and Technical Correspondence	1.0	31.914 Technical Report Writing	1.0		
		45.226 Ecology	1.5		
Elective	1.0				
Year 3					
45.120 Plants and Soils 1	1.0	45.220 Plants and Soils 1	1.5		
Elective	1.0	Elective	1.5		

Suggested Electives

		Units
45.103	Wood Utilization	1.0
45.326	Community and Habitat Ecology	1.5
45.904	Principles and Practices in Wildlife Management	1.0
51.540/640	Engineering Surveying	2.5

Engineering Technician Certificate in Fish, Wildlife & Recreation

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
32.901 Algebra 2	1.0	32.902 Logarithms & Analytic Geometry	1.0	32.903 Trigonometry	1.0
45.120 Plant and Soils 1	1.0	45.226 Ecology	1.5	Elective	1.0
Year 2					
31.910 Business & Technical Correspondence	1.0	31.914 Technical Report Writing	1.0		
45.910 Wildland Recreation & Park Management	1.0	45.326 Community and Habitat Ecology	1.5		
Year 3					
45.904 Principles & Practices in Wildlife Management	1.0	45.911 B.C. Fish and Fisheries	1.0		
Elective	1.0	Elective	1.0		

Suggested Electives

		Units
10.904	Supervisory Skills	1.0
10.905	Managerial Styles	1.0
30.902	Chemical Principles 1	2.0
45.903	Forest Land Management	1.5

Credits obtained in night school courses are not automatically granted to the day school courses and students are advised to seek consultation with the Forest Resources Technology if they are planning to attend the day school program. Students should also be aware of the fact that the National Diploma is not currently available through the night school program.

Day School Equivalency

Students interested in applying Continuing Education course credits toward day school courses should contact our Program Consultants for further details.

45.103 WOOD UTILIZATION

This course will enable the student to develop an understanding of the structure, properties, products, and uses of the commercial woods of B.C. This subject matter will be useful whether the student is engaged in construction, working in the field as a forest technician, embarking on a career in forest products, or interested in "do-it-yourself" projects.

Outline: wood as a construction material, tree growth and natural characteristics, structure and identification of woods, properties of wood and wood deterioration, wood utilization.

Text: "Canadian Lumber Grading Manual"

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

45.120 PLANTS AND SOILS 1

This introductory course is designed for those individuals who wish to learn more about plants and their distribution in B.C. Students will learn to identify important plants through the use of identification keys, to recognize factors that affect the distribution and associating tendencies of plants and to relate the associating tendencies of plants to various types of land use.

Outline: the basic structure and major functions of plant cells and tissues; identification of conifers, broad leaf trees, shrubs, herbs, grasses, ferns and mosses; factors (climate, soil, biota, relief and time) affecting plant distribution; plant associations and their application in land use assessment. There will be three labs held in the field on Saturdays or Sundays. Students should be prepared to provide their own transportation.

Texts: "General Botany", The Barnes and Noble Outline Series (Fuller, J.H. and Ritchie, D.D. 1967); and "Trees, Shubs and Flowers to Know in B.C.", (Lyons, C.O. 1965)

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

45.220 PLANTS AND SOILS 2

Prerequisite: 45.120 Plants and Soils 1

This course will introduce materials and concepts to enable the student to understand how soils form and how this knowledge may be applied in land management. Successful students will be able to recognize and describe soil materials and soil behavior for various land uses.

Outline: Laboratory, lecture and field exercises cover the following topics: the recognition of soil parent materials; factors of soil formation (climate, topography, biotic conditions and time); the Canadian System of Soil Classification. A field project will be required in the description and assessment of landscape and related soil characteristics. Some weekend field trips will be conducted according to the students needs. Students will be required to provide their own transportation.

Text: "The Nature and Properties of Soils" (N.C. Brady, 1974)

Term 2 Jan. 14 Wed. 1845-2145
18 weeks 1.5 Units

45.226 ECOLOGY

This course will introduce students to the basic concepts and terminology of ecology. It will develop an appreciation for the components of ecosystems including man and his activities, outline the energy flow in, and introduce management aspects of numerous ecosystems.

After successful completion of this course students will be able to identify numerous ecosystems of terrestrial and aquatic environments, describe energy fixation/transfer in them and recognize major approaches towards their proper management.

Outline: The material will be presented in the form of lectures and closely allied tutorials. Approximately four field trips will be held on Saturdays and Sundays in lieu of classroom sessions. Students should be prepared to provide their own transportation.

Text: "Challenge of Ecology"; C.C. Kucera (1977)

Term 2 Jan. 12 Mon. 1845-2145
18 weeks 1.5 Units

45.326 COMMUNITY AND HABITAT ECOLOGY

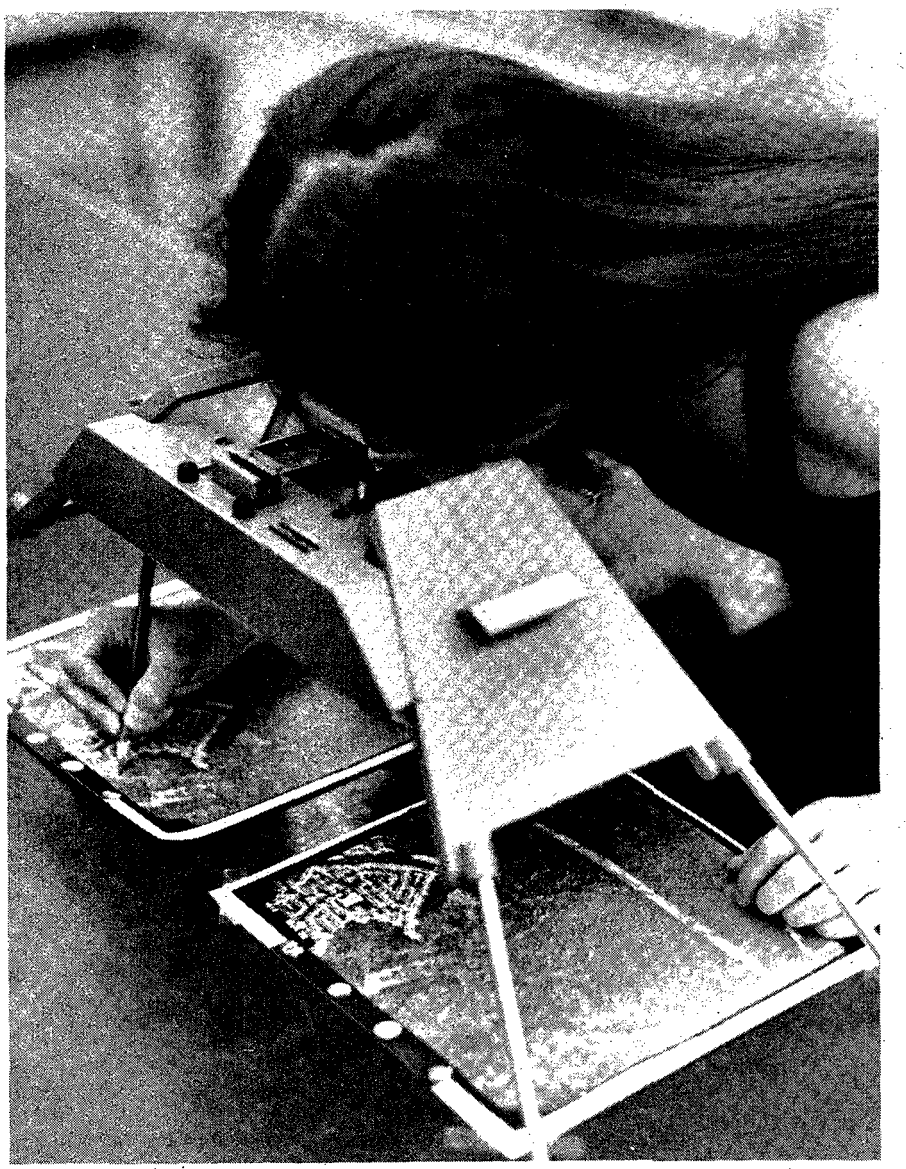
This course will provide the knowledge necessary for junior personnel in the renewable resources fields to recognize, describe and appreciate productive capacities of homogeneous land types in B.C.

After completing this course successful students will be able to recognize and evaluate, for various uses, a wide spectrum of wildland habitats and to appreciate the ecological factors and their functions in the formation of habitats.

Outline: ecological factors, geology, climate, biotic condition, geographical history in the formation of habitats, formation and geography of soils; plant associations and the biogeoclimatic classification of B.C.

Note: Students should be prepared to participate in 2-3 weekend field trips in lieu of evening sessions.

Term 2 Jan. 15 Thur. 1845-2145
18 weeks 1.5 Units



45.501/601 FOREST MEASUREMENT 1

This course will familiarize students with methods of forest surveying used in logging layout and forest measurement.

On completion of this course successful students will have an understanding of the fundamental concepts of forest engineering.

Outline: measurement of distance, direction and elevation; traverse data collection, recording and calculation; plotting topographic detail, care and maintenance of equipment.

Term 1 Sept. 13 Sat. 0900-1200
12 weeks 1.0 Unit

continues:

Term 2 Jan. 17 Sat. 0900-1200
12 weeks 1.0 Unit

45.502/602 FOREST MEASUREMENT 2

Prerequisite: 45.501/601 Forest Measurement 1

This course will familiarize the student with advanced methods of forest timber volume measurement and calculation, sampling and report compilation.

Outline: measurement of standing and felled timber, tree diameter, height and age; use of volume tables, construction of local volume tables; sampling types and design; aerial sampling, point sampling with elementary statistical analysis; and compilation methods for sample data and report writing.

Term 1 Sept. 13 Sat. 0900-1200
12 weeks 1.0 Unit

continues:

Term 2 Jan. 17 Sat. 0900-1200
12 weeks 1.0 Unit

45.903 FOREST LAND MANAGEMENT

This course will acquaint students with management techniques employed to solve problems inherent in the use of forest lands.

Outline: The four major aspects of forest land management will be integrated into a comprehensive unit which will enable the student to understand management procedures. This is accomplished by relating historical events to present management policies; outlining the government agencies responsible for forest land management; determining the main uses of forest lands, examining the conflicts which arise, and examining land tenure disposition.

Text: "New Forest Act"

Note: For Day School equivalency, adequate field work as prescribed by the instructor must be completed.

Term 2 Jan. 15 Thur. 1845-2145
18 weeks 1.5 Units

45.904 PRINCIPLES AND PRACTICES IN WILDLIFE MANAGEMENT

This course will provide a basic explanation and survey of this field for interested naturalists, sportsmen, and others, as well as for technical and professional graduates in forestry, agriculture and other resources-based fields. It will impart an appreciation of the fundamental principles related to management and exploitation of natural animal populations.

Outline: general ecological concepts; principles of population biology; habitat relationships; study of the methods and techniques of application in effective wildlife management; census and evaluation techniques; special problems (pesticides, wildlife damage, etc.)

Texts: "Wildlife Management Techniques", R. Giles, 3rd Edition; and "Wildlife Biology", R. Dasmann: Wiley (1964)

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

45.905 CONSERVATION, OUTDOOR RECREATION, EDUCATION

This preliminary course will acquaint the outdoorsman with some of the recreational options associated with wildlife and provide instruction on safety and enjoyment of the outdoors.

Upon completion of the course the student will be able to improve hunting standards and promote safe and knowledgeable outdoor recreation and an appreciation of the value of wildlife and natural environments in our modern way of life. The student will be expected to write the CORE examination as a prerequisite to obtaining a hunting licence, which is mandatory under the Wildlife Act.

Outline: The following will be covered by lectures, slides, and displays: ecology – conservation and the future, wildlife management and restoration, habitat requirements of wildlife and animal movements, organization of the fish and wildlife branch, outdoor ethics, firearm handling, why we have regulations, animal identification, some birds of B.C., fish of B.C., survival and first aid, archery and canoeing, backpacking and mountaineering.

Text: "Fish and Wildlife, the Recreational Resource".

Note: This is a non-credit course, which cannot be applied towards an Engineering Technician Certificate

Term 1 Sept. 8 Mon. 1845-2145
12 weeks

begins again:

Term 2 Jan. 12 Mon. 1845-2145

45.910 WILDLAND RECREATION AND PARK MANAGEMENT

This course will make the student aware of the importance of both recreation and the wildland recreation manager, in the proper planning and administration of Canada's Wildlands. It will provide the student with a working knowledge of recreational pursuits on public and private wildlands within B.C. and inform him of specific criteria involved in the assessment and management of recreational wildland.

Outline: an introduction to recreation, wilderness management, winter-oriented recreation, water-oriented recreation, campsite design, wildlife in parks, interpretation, visual management, public input in decision-making, trail design, etc.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

45.911 B.C. FISH AND FISHERIES

This course will provide basic knowledge and technical information relating to B.C. fish and their management for naturalists, sportsmen and foresters, agriculturists and others in the resources field.

After completing this course successful students will have learned about the biology and characteristics of numerous species of B.C. fish as well as have gained an insight into parameters of fisheries management.

Outline: population, dynamics, fish physiology, survey techniques, pollution sampling, resource problems, B.C. fishing regulations and their effects. Approximately six sessions will involve examination and discussion of preserved specimens. These sessions will be supplemented with presentations related to the biology of the species under discussion. The remaining sessions will deal with the management aspects of the fisheries resource.

Text: "Fresh Water Fish of British Columbia"; B.C. Provincial Museum Handbook Series

This course will be offered in 1981/82

Engineering Technician Certificate in Mechanical Technology

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With the approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
32.901 Algebra 2	1.0	32.902 Logarithms and Analytic Geometry	1.0	32.903 Trigonometry	1.0
49.915 Applied Mechanics 1	1.0	49.916 Applied Mechanics 2	1.0	49.917 Applied Mechanics 3	1.0
Year 2					
41.502 Metallurgy 1	1.0	41.602 Metallurgy 1	1.0	31.910 Business & Technical Correspondence	1.0
49.918 Mechanics of Materials 1	1.0	49.919 Mechanics of Materials 2	1.0		
or		or			
49.923 Mechanics of Fluids	1.0	49.924 Pumps and Fluid Systems	1.0		
or		or			
49.921 Applied Heat 1	1.0	49.922 Applied Heat 2	1.0		
Year 3					
49.543 Manufacturing Processes 1	1.0	49.643 Manufacturing Processes 1	1.5		
49.900 Drafting Fundamentals	1.0	49.903 Mechanical Drafting 1	1.5		

Senior Engineering Technician Certificate in Mechanical Technology

The following Senior certificate program is obtainable over three years. All courses shown for the Engineering Technician Certificate in Mechanical Technology are also required for this higher level certificate.

Students may amend this program to suit their personal career requirements with the approval of a Program Consultant. Fifteen units are required for the certificate.

Term 1 (September)		*Term 2 (January)*		*Term 3*	
Year 4	*Units*		*Units*		*Units*
32.931 Calculus 1	2.0	49.903 Mechanical Drafting 1	1.5	31.914 Technical Report Writing	1.0
49.542 Fluid Power 1	1.0	49.642 Fluid Power 2	1.5		
Year 5					
49.544 Manufacturing Processes 2	1.0	49.644 Manufacturing Processes 2	1.5	49.920 Mechanics of Materials 3	1.0
49.932 Engineering Economics	1.0	49.919 Mechanics of Materials 2	1.0		
Year 6					
33.509 Physics 2	1.0	33.609 Physics 2	1.0		
Mechanical Elective	1.0	Mechanical Elective	1.0		

Note: 48.918 Mechanical of Materials 1 is a prerequisite for 48.919 Mechanics of Materials 2.

National Diploma in Mechanical Technology

Students should complete the Senior Engineering Technician Certificate before advancing to the National Diploma Program.

The following National Diploma Program is attainable over three years. A minimum of fifteen units is required in this final phase to the diploma.

Term 1 (September)		*Term 2 (January)*		*Term 3 (April)*	
Year 7	*Units*		*Units*		*Units*
Mechanical Technology Electives	2.0	Mechanical Technology Elective	1.0	Approved Elective	1.0
		Approved Elective	1.5		
Year 8					
49.531 Elements of Machine Design	1.0	49.631 Elements of Machine Design	1.5		
49.906 Descriptive Geometry	1.0	Mechanical Drafting 2	1.5		
Year 9					
49.585 Production Engineering Management	1.0	49.685 Production Engineering Management	1.5		
Elective	1.0	Elective	1.0		

Suggested Electives

		Units
32.932	Calculus 2	2.0
32.957	Statistical Quality Control with Industrial Applications	1.0
49.520/620	Heating, Ventilation, Refrigeration and Air Conditioning Systems	2.0
49.531/631	Elements of Machine Design	2.5
49.545/645	Tool Design	2.0
49.585/685	Production Engineering Management	2.5
49.906	Descriptive Geometry	1.0
49.919	Mechanics of Materials 2	1.0
49.922	Applied Heat 2	1.0
49.924	Pumps and Fluid Systems	1.0
49.925	Fans and Ductwork Systems	1.0
49.927/928	Plumbing Systems Design 1 and 2	2.5
49.929	Heating, Ventilation, Air Conditioning Fundamentals	1.0
49.930	Metrology	1.5
49.931	Analysis of Machining Techniques	1.5
49.933	Refrigeration, Heat Transfer and Thermal Power Systems	1.5
49.935/936	Automatic Sprinkler Systems Design 1 and 2	2.5

Engineering Technician Certificate in Drafting

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual needs.

Term 1 (September)		Term 2 (January)		*Term 3 (April)*	
Year 1	*Units*		Units		*Units*
32.901 Algebra 2	1.0	32.902 Logarithms and Analytic		32.903 Trigonometry	1.0
49.900 Drafting Fundamentals	1.0	Geometry	1.0	31.910 Business & Technical	
		49.903 Mechanical Drafting 1	1.0	Correspondence	1.0
Year 2					
49.906 Descriptive Geometry	1.0	49.905 Mechanical Drafting 2	1.0	49.917 Applied Mechanics 3	1.0
49.915 Applied Mechanics 1	1.0	49.916 Applied Mechanics 2	1.0		
Year 3					
Approved Electives	2.0	Approved Electives	2.0		

Suggested Electives

		Units
31.914	Technical Report Writing	1.0
40.512/612	Building Construction 1	5.0
40.522/622	Building Construction 2	2.5
41.502/602	Metallurgy 1	2.0
43.520/620	Electrical Drafting	2.0
49.905	Drafting – Civil and Structural	1.5
51.507/607	Survey Drafting	2.0
53.903	Grading and Drainage	1.0
53.904	Landscape Structurals	1.0

Engineering Technician Certificate in Energy Technology

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

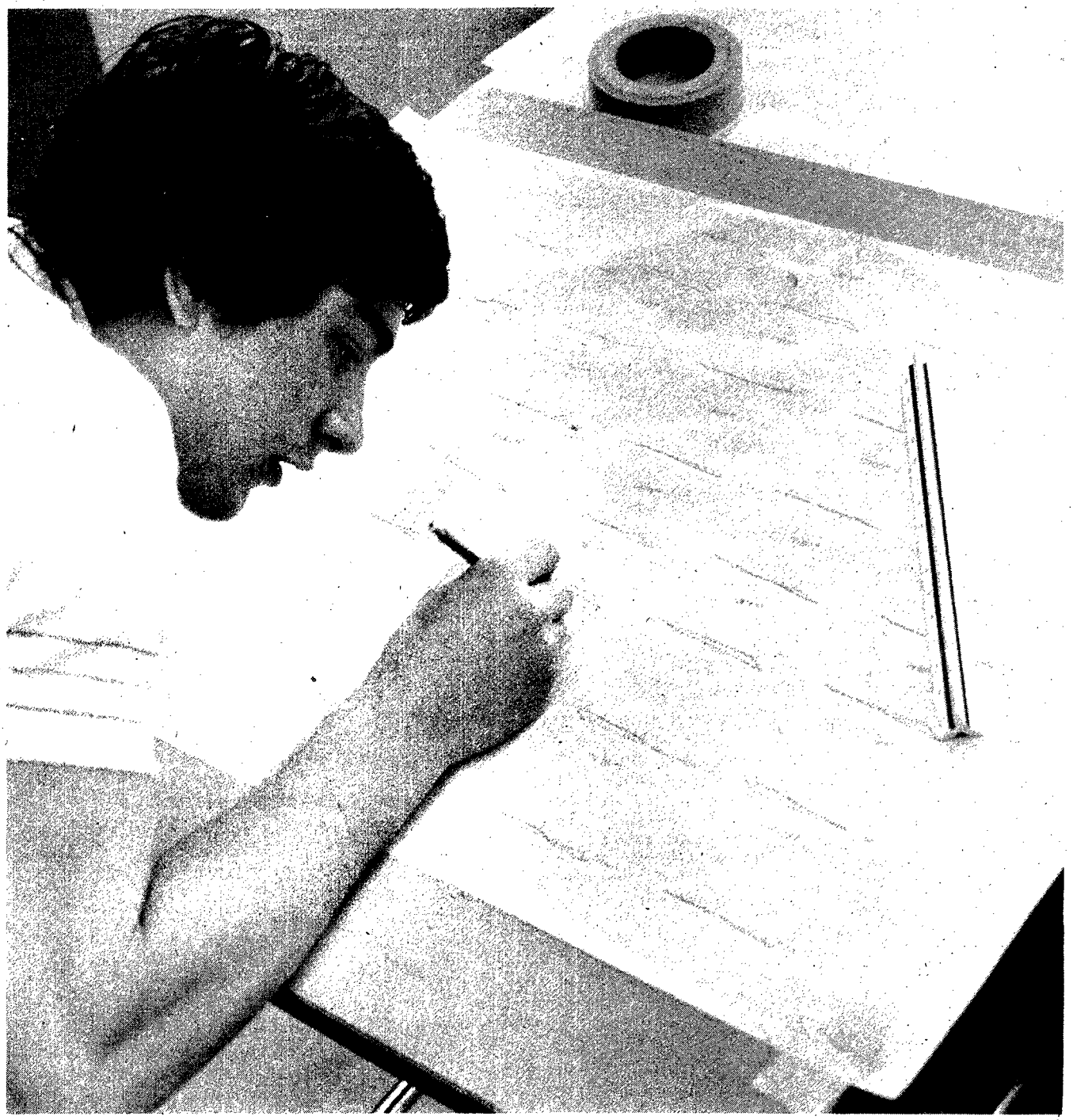
September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
32.901 Algebra 2	1.0	32.902 Logarithms and Analytic		32.902 Trigonometry	1.0
49.915 Applied Mechanics 1	1.0	Geometry	1.0		
		49.900 Drafting Fundamentals	1.0		
Year 2					
33.508 Physics 1	1.0	33.608 Physics 1	1.0		
49.921 Applied Heat 1	1.0	49.922 Applied Heat 2	1.0		
Year 3					
49.923 Mechanics of Fluids	1.0	49.989 Energy Conscious Design	1.0		
49.587 Solar Engineering – Design		49.986 Solar Update	1.0		
& Economics	1.0	49.687 Solar Engineering – Design			
Year 4		& Economics	1.0		
49.520 Heating, Ventilation, Air		49.620 Heating, Ventilation, Air			
Conditioning Systems	1.0	Conditioning Systems	1.0		

Suggested Electives

		Units
31.914	Technical Report Writing	1.0
33.509/609	Physics 2	2.0
40.543/643	Building Services Electrical	2.0
40.915	National Building Code	1.0

Day School Equivalency

Students interested in applying Continuing Education course credits toward day school courses should contact our Program Consultants for further details.



49.520/620 HEATING, VENTILATION, REFRIGERATION AND AIR CONDITIONING SYSTEMS

Prerequisite: 49.921 Applied Heat 1 and 49.923 Mechanics of Fluids, or 49.929 Heating, Ventilation and Air Conditioning Fundamentals

This is a design course for technical people involved with heating, ventilation, refrigeration and air conditioning systems.

Students will learn to understand the principles of load estimation and energy requirements and to select the proper equipment to suit the application, and to control the equipment to suit the needs of the occupants.

Outline: energy costs for oil, gas and electricity, to meet the design conditions, heat load, cooling load, air psychometrics; air conditioning systems and applications; equipment for heating; refrigeration equipment; introduction to duct layout; air balancing methods in air systems; control of systems.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

continues:

Term 2 Jan. 12 Mon. 1845-2145
12 weeks 1.0 Unit

49.531/631 ELEMENTS OF MACHINE DESIGN

Prerequisites: 49.919 Mechanics of Materials 2 and 32.931 Calculus 1 and 49.920 Mechanics of Materials 3 and 32.932 Calculus 2 are strongly recommended

This course is intended for draftsmen and designers who require the capabiity of basic machine design. On successful completion of the course the student will be able to carry out detailed design of various machine components and to carry out stress and deflection analysis. Individuals will be able to select and specify appropriate standard components for machine assemblies and mechanical drives.

Outline: review and consolidation of theory in prerequisite courses; stress concentration; fatigue phenomena; welded connections; bolted and riveted connections; spur, helical and worm gear drives; speed reducers; belt and roller chain drives; flexible couplings; shafts; anti-friction and journal bearings; brakes and clutches; power screws; helical and leaf springs; an introduction to mechanical vibrations with emphasis on the critical speeds of rotating assemblies.

Text: Shigley: "Mechanical Engineering Design", 3rd Edition – McGraw-Hill Ryerson

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

continues:

Term 2 Jan. 14 Wed. 1845-2145
18 weeks 1.5 Units

49.542 FLUID POWER 1

This course will provide an understanding of pneumatic and hydraulic control systems, including circuit diagrams. It will enable students to draw design diagrams of fluid power circuits using ISO symbols and to construct and test the circuits.

Outline: fluid power fundamentals; circuit symbols, use of components in fluid power, etc.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

49.543/643 MANUFACTURING PROCESSES 1

This course will provide a general insignt into the various aspects of production engineering related to manufacturing for persons entering or presently engaged in the mechanical field. Successful students will develop an understanding of traditional manufacturing processes and learn of the recent advances in this field.

Outline: Lectures, demonstrations, assigned problems and laboratory experience are all part of the course. Topics include: the study of modern manufacturing processes, casting, welding, hot and cold forming, extruding, forging, die casting, stamping and pressing. Field trips to appropriate local industries are arranged.

Text: "Manufacturing Processes and Materials for Engineers"; 2nd Edition; Doyle/Feyser/Leach/Schrader/Singer; Prentice-Hall

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

continues:

Term 2 Jan. 13 Tue. 1845-2145
18 weeks 1.5 Units

49.544/644 MANUFACTURING PROCESSES 2

This course will provide a general insight into the various aspects of production engineering related to manufacturing for persons entering or presently engaged in the mechanical field.

Students will develop an understanding of traditional manufacturing processes and become aware of the recent advances in this field.

Outline: Lectures, demonstrations, assigned problems and laboratory experience are part of this course. Topics include: the study of modern machine tools, machinability of materials, practical experience on all of the basic machine tools, engine lathe, turret lathe, vertical and horizontal milling, shaping, planing, surface and cylindrical grinding, band sawing and drilling machines.

Text: "Manufacturing Processes and Materials for Engineers"; Doyle/Keyser/Leach/Schrader/Singer; Prentice-Hall

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

continues:

Term 2 Jan. 15 Thur. 1845-2145
18 weeks 1.5 Units

49.545/645 TOOL DESIGN

Prerequisite: 49.900 Drafting Fundamentals

This course is intended to help those working in industry who could benefit by broadening their activities into the field of special purpose tooling. Upon successful completion of the course, students will be able to solve problems commonly met within design of special purpose tooling.

Outline: introduction to design of special purpose tooling, process planning, design considerations of various types of jigs, fixtures, gauges, metal-cutting dies, feed mechanisms, presses, scrap strip layout, standard parts. Some design assignments will be worked on by students away from the classroom.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

continues:

Term 2 Jan. 13 Tue. 1845-2145
12 weeks 1.0 Unit

49.585/685 PRODUCTION ENGINEERING MANAGEMENT

This course will provide an insight into aspects of management and the industrial engineering functions of a manufacturing plant. It is intended for technologists, engineers, designers, draftspersons, and technical sales people who wish to have a clearer understanding of the range of decisions that are made continuously in a manufacturing organization. It will provide an understanding of manufacturing problems and provide some basic skills in control, planning, layouts, handling and in labor management relations.

Outline: Lecture, case studies and films will present the following topics: management and plant organization, plant locations and layouts, production control, maintenance, production planning, economics in manufacturing methods, and labor relations.

Text: "Manufacturing Organization and Management"; Amrine, Ritchey and Hulley; Prentice-Hall

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

continues:

Term 2 Jan. 15 Thur. 1845-2145
18 weeks 1.5 Units

49.587/687 SOLAR ENGINEERING – DESIGN AND ECONOMICS

This course will provide practitioners in the building industry with basic technical skills related to sizing, costing, installing and operating economic solar systems.

Outline: With consideration of Canadian requirements, course material and workshops will be based on a selection of the following topics: design parameters and procedures, passive solar heating systems, residential heat pump systems, commercial heat pump systems, seasonal storage solar heating systems, related economics.

Texts: "Solar Heating and Cooling of Residential Buildings"; "Sizing Installation and Operation of Systems"; and "Design of

Systems" – Solar Energy Applications Laboratory, Colorado State University

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

continues:

Term 2 Jan. 14 Wed. 1845-2145
12 weeks 1.0 Unit

49.642 FLUID POWER 2

Prerequisites: 49.542 Fluid Power 1 and 49.915 Applied Mechanics 1. This course is a continuation of 49.542

Outline: fluid power hydraulics: principles of power hydraulics; simple hydraulic circuits and circuit symbols; physical laws and formulae used in hydraulics; hydraulic fluids; equipment, reservoirs, strainers, filters, pumps, motors, tubing and fittings, valves.

Term 2 Jan. 13 Tue. 1845-2145
18 weeks 1.5 Units

49.900 DRAFTING FUNDAMENTALS

This introductory drafting course is for those individuals with little or no experience in graphics. (Students will be required to purchase drafting equipment and supplies on the first night of class.) Upon successful completion of this course students will be able to produce and read simple drawings.

Outline: scales, geometric constructions, basic orthographics, detail interpretation, line visibility, dimensioning, auxiliary views, true shape, inclined and skew surfaces, sections, pictorials, working drawings and freehand sketches.

Term 1 Sept. 9 Tue. 1845-2145
Sept. 11 Thur.
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 13 Tue. 1845-2145
Jan. 15 Thur.

begins again:

Term 3 Apr. 7 Tue. 1845-2145

49.903 MECHANICAL DRAFTING 1

Prerequisite: 49.900 Drafting Fundamentals

This course will provide a working knowledge of engineering drawing practice for those who wish to work as draftsmen or need frequently to prepare or read engineering drawings.

Successful students will be able to design graphically; to use problem-solving skills and to handle information in technical applications expected of mechanical technicians.

Outline: introduction to descriptive geometry, developments, threads and fasteners, weld symbols, limits and fits, surface roughness symbology, piping (iso and ortho), single-line diagrams, assembly drawings, geometric tolerance, bills of material and catalogue specifications.

Term 2 Jan. 12 Mon. 1845-2145
18 weeks 1.5 Units

49.905 DRAFTING – CIVIL AND STRUCTURAL

Prerequisite: 49.900 Drafting Fundamentals

This course will provide a general insight into the graphical aspects of civil and structural problems. It will be of benefit to managers, construction workers, foremen, planners and estimators. Successful students will have a good understanding of and reasonable proficiency in the application of drawing skills and techniques in civil and structural engineering.

Outline: topographical drafting, contours, sections, profiles, cuts and fills in civil and structural problems and projects.

Term 2 Jan. 12 Mon. 1845-2145
12 weeks 1.0 Unit

49.906 DESCRIPTIVE GEOMETRY

Prerequisite: 49.900 Drafting Fundamentals

This course is intended for those with a basic knowledge of engineering drawing who want to broaden their skills into selected areas of descriptive geometry related to the engineering industry. Successful students will develop skills in the area of spatial problem-solving using graphics.

Outline: true length lines, parallel and intersecting lines, shortest line between skew lines, line in a plane, true size of plane, dihedral angle, intersection of plane and polyhedron, intersection of surfaces and development of surfaces (prisms, cylinders, cones).

Text: "Descriptive Geometry"; McHawk, McGraw-Hill (Schaum's outline series)

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 15 Thur. 1845-2145

49.907 MECHANICAL DRAFTING 2

Prerequisite: 49.903 Mechanical Drafting 1

This is a more advanced course in engineering drawing pratice for those wanting to upgrade their skills above the basic drafting level. It will provide challenge and experience in the mechanical drafting area, with emphasis on graphical problem-solving techniques.

Outline: Cam profiles, displacement diagrams, graphical solutions for engineering problems, deflection of stepped shafts, graphical calculus methods, and design of mechanical assemblies to suit manufacturing methods.

Term 2 Jan. 12 Mon. 1845-2145
18 weeks 1.5 Units

49.915 APPLIED MECHANICS 1

Prerequisites: 32.901 Algebra 2 and 32.903 Trigonometry

This course will help students to understand how forces affect mechanical systems. Those who successfully complete this course will be able to solve elementary problems and understand terminology used in force calculations.

Outline: forces: characteristics, units, transmissibility components and resultants; friction: static and kinetic friction coefficients, angle of friction, classes of motion; displacement: velocity and acceleration diagrams; Newton's Laws of Motion: free falling bodies, accelerating forces; angular displacement: velocity and acceleration, relationship between angular and rectilinear motion; work, energy and power definitions, work done by constant forces, potential and kinetic energy, power equations and efficiency. Both English and Metric (SI) units are used.

Text: "Applied Mechanics for Engineering Technology", Second Edition, Second Printing, R. Walker, Reston.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

49.916 APPLIED MECHANICS 2

Prerequisite: Applied Mechanics 1

This course is a continuation of 49.915 Applied Mechanics 1.

Outline: moments, couples, equilibrium with built-in moments; simple trusses and frameworks; analytical method of joints; Bow's notation and analysis of frameworks; centroids and centres of gravity of areas and solids; second moment of inertia, simple and composite concept of radius of gyration; inertial forces and moments of inertia of simple and composite bodies; torque and angular acceleration; impulse, momentum and impacting definitions and equations.

Text: "Applied Mechanics for Engineering Technology", Second Edition, Second Printing, R. Walker, Reston

Term 2 Jan. 13 Tue. 1845-2145
12 weeks 1.0 Unit

49.917 APPLIED MECHANICS 3

Prerequisite: Applied Mechanics 2

This course is a continuation of 49.916 Applied Mechanics 2.

Outline: resultants and the equivalent of coplanar non-current, non-coplanar parallel and non-current and non-coplanar concurrent force systems; friction on an inclined plane; screw threads; efficiency, rolling resistance; belt friction, belt drives; relative velocity, vectorial difference, absolute velocity; centripetal and centrifugal acceleration and force; the conical pendulum and governors; balancing of rotating masses, stability of a vehicle on a circular path.

Text: "Applied Mechanics for Engineering Technology", Second Edition, Second Printing, R. Walker, Reston

Term 3 Apr. 7 Tue. 1845-2145
12 weeks 1.0 Unit

49.918 MECHANICS OF MATERIALS 1

Prerequisite: 49.917 Applied Mechanics 3. Strongly recommended, 32.931 Calculus 1.

The course is for mechanical draftsmen, designers, and technical sales personnel. Upon successfully completing this course students will have developed a basic understanding of the skills of analysis and design of

elementary structural and mechanical members subjected to static loading.

Outline: properties and behavior of engineering materials; elementary theory of elasticity related to axial and torsional loading; shear force and bending moment in beams; theory of flexures and flexural stress; principles of superposition; beams with non-coplanar loads; deflection in statically determinate beams; introduction to statically indeterminate members and thin-wall pressure vessels.

Text: "Theory and Problems of Strength of Materials" 2nd Edition, Nash: Schaum's Outline Series, McGraw-Hill Ryerson

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

49.919 MECHANICS OF MATERIALS 2

Prerequisites: 49.918 Mechanics of Materials 1; 32.931 Calculus 1

Successful students will be able to deal with more complex problems of members under static loading than covered in Mechanics of Materials 1.

Outline: further study of statically indeterminate members with respect to stress in beams, columns, struts and trusses.

Text: "Theory and Problems of Strength of Materials" 2nd Edition, Nash: Schaum's Outline Series, McGraw-Hill Ryerson

Term 2 Jan. 14 Wed. 1845-2145
12 weeks 1.0 Unit

49.920 MECHANICS OF MATERIALS 3

Prerequisites: 49.919 Mechanics of Materials 2; 32.931 Calculus 1

Students will increase their experience with problems in the design and analysis of machine components as a sequel to Mechanics of Materials 2.

Outline: combined loading systems and resultant stresses, with emphasis on solution by means of Mohr's circles; theories of failure and design factors; strain-energy methods for the determination of stress and deflection.

Text: "Theory and Problems of Strength of Materials" 2nd Edition, Nash: Schaum's Outline Series, McGraw-Hill Ryerson

Term 3 Apr. 8 Wed. 1845-2145
12 weeks 1.0 Unit

49.921 APPLIED HEAT 1

Prerequisites: 32.901 Algebra 2 and 32.903 Trigonometry

This course will provide students with an understanding of the fundamentals of applied thermodynamics and help those involved in the power and process fields and those who intend to take more specialized course in heating, ventilating, refrigeration and heat transfer.

Outline: energy, temperature, transmission of heat; specific heat, conductivity, convection, radiation, molecular theory, ideal gas, expansion of solids, liquids and gases due to heat, pressure, vacuum; Boyles Law; the Gas Equation.

Text: "Thermodynamics and Heat Power"; I. Granet; Reston

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

49.922 APPLIED HEAT 2

Prerequisite: 49.921 Applied Heat 1

Outline: thermal properties of liquids and gases; gas processes, psychrometric chart; power cycles; refrigeration and heat transfer fundamentals.

Text: "Thermodynamics and Heat Power"; I. Granet, Reston

Term 2 Jan. 15 Thur. 1845-2145
12 weeks 1.0 Unit

49.923 MECHANICS OF FLUIDS

Prerequisite: 49.915 Applied Mechanics 1

This course is designed for students requiring a basic understanding of fluid properties and methods of determination of energy losses involved in fluid systems. It will provide students with the necessary skills to analyze any fluid process or system for fluid energy losses or power requirements. Students wishing to take more advanced practical engineering courses will benefit from understanding the principles of fluid systems.

Outline: basic properties of fluids; Bernoulli's Equation, energy and power transfer; flow measurement and pipe flow characteristics for both liquids and gases; heat and energy losses; laminar and turbulent flow characteristics and forces due to change in fluid flow.

Term 2 Jan. 14 Wed. 1845-2145
18 weeks 1.5 Units

49.924 PUMPS AND FLUID SYSTEMS

Prerequisite: 49.923 Mechanics of Fluids

This course will provide an understanding of the various types of pumps and their applications in different systems. Successful students will be able to calculate liquid flow quantities in pipe systems, properly select the type of pump for a given application and understand pump operating conditions.

Outline: classification of pumps, centrifugal pump theory, pump construction; pump drives, variable speed couplings; characteristics of pumping systems, special industrial pump applications and controls; pump installation and maintenance.

Term 2 Jan. 13 Tue. 1845-2145
12 weeks 1.0 Unit

49.925 FANS AND DUCTWORK SYSTEMS

Prerequisite: 49.923 Mechanics of Fluids

This course is intended to provide an understanding the types of fans and their application together with an approach for sizing supply and exhaust ducts and conveying systems.

Students will learn to lay out various duct systems to deliver required air quantities and to select the proper equipment to suit each system.

Outline: air distribution in heating and air conditioning systems; capture velocity and design of exhaust systems; ventilation in industry with applications to suit student needs; pneumatic conveying. Laboratory tests on various types of fans will be included in the course.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

49.927 PLUMBING SYSTEMS DESIGN 1

This course is for persons involved in engineering design and sales supervision or inspection of commercial and industrial plumbing systems. Upon successful completion of this course students will be able to select the location and installation requirements of piping, fixtures and appliances for compliance with relevant codes, regulations, manufacturer's specifications and engineering practices.

Outline: codes; basic engineering principles and graphic presentations related to plumbing systems design; load calculations; piping methods. Sizing of pipes and equipment selection for storm, sanitary, drainage and water distribution; fixtures and materials. Some drafting skill will be required.

Term 1 Sept. 12 Wed. 1845-2145
12 weeks 1.0 Unit

49.928 PLUMBING SYSTEMS DESIGN 2

Prerequisite: 49.927 Plumbing Systems Design 1

This course provides further instruction for persons involved in engineering, design, sales, installation, supervision or inspection of commercial and industrial plumbing and gas piping systems. Successful students will be able to design, apply and adapt various plumbing systems to commercial and industrial premises in compliance with required regulations and specifications.

Outline: load calculations, piping methods, approved materials, pipe sizing for storm and sanitary drainage; hot and cold water distribution, septic tank systems, gas piping and appliance installation, pumps and field inspection techniques.

Term 2 Jan. 14 Wed. 1845-2145
18 weeks 1.5 Units

49.929 HEATING, VENTILATION AND AIR CONDITIONING FUNDAMENTALS

This course will provide students with basic thermal, fluid and energy concepts in preparation for further studies in heating, ventilation and air conditioning systems.

Outline: physical quantities, units, fluid and thermal fundamentals, principles of refrigeration, properties of air, the psychrometric chart and problem solving.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

49.930 METROLOGY

Prerequisites: 32.901 Algebra 2 and 32.903 Trigonometry

This course will familiarize industrial management and production personnel with inspec-

tion methods and equipment as used in industry. Successful students will learn the principles of various inspection methods and their practical uses in industry.

Outline: interferometers, optical comparators, measuring devices for surface texture and surface flatness: air and electronic gauging procedures; metrology of angles and screw threads; use of precision measuring instruments and mass production gauging.

Text: "Metrology for Engineers"; J.F.W. Galyer & C.R. Shotbolt, Cassell Technical Book

Term 2 Jan. 12 Mon. 1845-2145
18 weeks 1.5 Units

49.931 ANALYSIS OF MACHINING TECHNIQUES

Prerequisite: 49.544/644 Manufacturing Processes 2

This course will familiarize management and production personnel with operations performed on machine tools such as tape--control drill, jig borer, milling machine and cylindrical grinder. It will provide an in-depth study of these operations.

Outline: Through a series of projects which emphasize practical work in small groups, the student will be involved in laboratory exercises. Topics include: programming for a numerical control machine, jig boring operations, milling machine operations and a turret lathe process. Each of these projects includes organizing the sequence of operations, processing, programming, time and cost estimating, machine and tool set-up, manufacture, inspection and quality control.

Text: "Manufacturing Processes and Materials for Engineers"; Doyle, Kesser, Leach, et al; Prentice Hall

Term 2 Jan. 14 Wed. 1845-2145
18 weeks 1.5 Units

49.932 ENGINEERING ECONOMICS

Prerequisites: 32.901 Algebra 2 and 32.902 Logarithms and Analytic Geometry

This course will emphasize the importance of making sound economic decisions when faced with alternative methods of solving technical problems. The course material will be useful to engineers, technologists, technicians and designers in all areas, both in their work and personal finances. It will provide the basic skills and concepts required to analyze comparative costs and to understand the time value of money (interest), inflation, depreciation, running costs, salvage value and tax considerations.

Outline: cash flow diagrams and equivalence, interest formulae, annual cost, present worth, uncertainties and inflation, taxes, economic lot sizes and replacement of equipment.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

49.933 REFRIGERATION, HEAT TRANSFER AND THERMAL POWER SYSTEMS

Prerequisite: 49.921 Applied Heat 1

This course will treat in greater depth, refrigeration systems and equipment introduced in Applied Heat1, give students experience in solving heat exchange problems and study modern thermal power generating systems. It will give students a greater understanding of refrigeration systems by showing how to solve problems in practical laboratory investigations; to understand the principles of heat transfer and be able to solve simple problems in the design of heat exchangers; to become more familiar with modern power generating systems and equipment.

Outline: vapor compression refrigeration cycles, multi-stage and cascade systems, absorption systems of refrigeration, the heat pump, steam-jet chiller. Heat transfer theory, conduction, convection, radiation. Problems in heat exchanger design, experimental investigations of heat transfer; modern power generating cycles, reheat, regenerative feed water heating, fossil fuel fired Rankine cycles, gas turbine intercooled, regenerative cycles.

Term 2 Jan. 14 Wed. 1845-2145
18 weeks 1.5 Units

49.935 AUTOMATIC SPRINKLER SYSTEMS DESIGN 1

Prerequisite: Grade 12 Mathematics or 32.900 Algebra 1

This course is for persons involved in engineering, design, supervision or inspection of commercial and industrial automatic sprinkler systems. Successful students will gain an understanding of pipe schedule systems and water supply system analysis.

Outline: standards, basic hydraulics of piping systems; water supply system analysis and test; wet pipe systems, dry pipe systems; quick-opening devices; system components and applications. Classroom lectures will be augmented by field visits to installations and possibly actual water flow test. There may be a Saturday field trip. Students will require an electronic calculator with XY function.

Texts: "NFPA Standard #13 (Automatic Sprinklers)", current edition; and "Automatic Sprinkler & Standpipe systems"; John L. Bryan; National Fire Protection Association, Boston

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

49.936 AUTOMATIC SPRINKLER SYSTEMS DESIGN 2

Prerequisite: 49.935 Automatic Sprinkler Systems Design 1 or permission of the instructor

Advanced instruction is provided for persons involved in engineering design, supervision or Successful students will gain an understanding inspection of commercial and industrial automatic sprinkler systems. The course will provide a general understanding of these systems to designers, engineers and fire service personnel.

Outline: effect of sprinkler protection on National Building Code requirements; deluge systems; pre-action systems; combined dry pipe and pre-action systems; hydraulics of tree, looped and gridded systems; computerized calculations; economical design considerations; water spray systems; special systems; outside water curtains; gravity tank and pressure tank water supplies; fire pumps, booster pumps, jockey pumps; maintenance of systems. Students will require an electronic calculator with XY function.

Texts: "NFPA Standard #13 (Automatic Sprinklers)", current edition; and "Automatic Sprinkler & Standpipe systems", John L. Bryan; National Fire Protection Association, Boston

Term 2 Jan. 15 Thur. 1845-2145
18 weeks 1.5 Units

49.986 SOLAR UPDATE

This course will present the latest technical developments in solar heating for practitioners in the building industry. It will give designers and others in the industry an update on developments in sizing, costing, installing and operating economic solar systems.

Outline: systems and components, solar radiation, heating load calculations, solar system sizing, system economics, design problem project, cost effectiveness constraints and incentives, heat pump systems: commercial and residential, installations, seasonal storage systems.

Texts: "Solar Heating and Cooling of Residential Buildings"; "Sizing, Installation and Operation of Systems"; and "Design of Systems" – Solar Energy Applications Laboratory, Colorado State University

Term 2 Jan. 12 Mon. 1845-2145
12 weeks 1.0 Unit

49.989 ENERGY CONSCIOUS DESIGN

This course will present to designers in the building industry the basic technology underlying reduction of building energy size through appropriate design. Successful students will develop competence in the fundamentals of energy-sensitive building design, including consideration of effects of site, building form and orientation, building skin, interval and solar gains and economics.

Outline: This course will cover the fundamentals of energy efficient building design. Topics include: climatic factors; building form and orientation in relation to their effects on energy use; thermal properties of the building skin and heating and natural lighting due to passive solar systems. System mathematical modelling will be used to optimize design.

Term 2 Jan. 15 Thur. 1845-2145
12 weeks 1.0 Unit

SURVEYING TECHNOLOGY

Engineering Technician Certificate in Surveying Technology

The following courses make up the suggested program for the basic certificate (minimum 15 units) attainable over three years. The three year period is flexible.

With approval of a Program Consultant, students may amend this recommended program to suit their individual career needs.

September (Term 1)		*January (Term 2)*		*April (Term 3)*	
Year 1	*Units*		*Units*		*Units*
51.502 Field Survey 1		51.602 Field Survey 1	2.5	14.050 Data Processing	
51.501 Survey Computations 1		51.601 Survey Computations 1	2.5	– Introduction	1.0
Year 2					
32.901 Algebra 2	1.0	51.612 Field Survey 2	2.5		
51.512 Field Survey 2		Elective	1.0		
Year 3					
51.511 Survey Computations 2		51.611 Survey Computations 2	2.5		
51.906 Plane & Spherical		Elective	1.0		
Trigonometry for Surveyors	1.0				

Suggested Electives

		Units
31.910	Business & Technical Correspondence	1.0
31.914	Technical Report Writing	1.0
32.902	Logarithms and Analytic Geometry	1.0
33.508/608	Physics 1	2.0
42.102	Hydrology	1.0
45.120/220	Plants and Soils 1 and 2	2.5
49.900	Drafting Fundamentals	1.0
49.903	Mechanical Drafting 1	1.5
50.101/201	Geology	2.0
51.504/604	Astronomy	2.0
51.505/605	Photogrammetry	2.5
51.507/607	Survey Drafting	2.0
51.910	Land Use Control	1.0
51.950	Hydrographic Survey	1.0

51.501/601 SURVEY COMPUTATIONS 1

This introductory course will be of value to field personnel; instrumentmen, chainmen, rodmen, etc., at present employed within the surveying industry.

On successful completion of this course the student should have obtained some experience in surveying computations.

Outline: trigonometric functions; solution of right and oblique triangles; chainage corrections, bearings – magnetic, quadrantal and full circle; traverse calculations; coordinates – polar and rectangular, missing parts; adjustments of traverses; stadia calculations; sub-division of areas; areas by DMD's and coordinates; simple circular curves.

Note: Students on this course will require an electronic calculator capable of converting degrees, minutes and seconds to decimal degrees and converting polar coordinates to rectangular coordinates.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks

continues:

Term 2 Jan. 13 Tue. 1845-2145
18 weeks 2.5 Units

51.502/602 FIELD SURVEY 1

This is an in-depth course in basic field surveying techniques and the operation of modern survey equipment. It is basic surveying designed for persons who intend to make a living at surveying. It should be taken in conjunction with Survey Computations 1 and leads into Field Survey 2.

Outline: fundamental definitions and concepts, fundamentals of field work, of field notes, errors, linear measurements, errors in linear measurements, basic problem in chaining, use of compass in surveying, use of level and level rod (theory, field work) errors in levelling, reading transit angles, use of the transit, error in transit work; transit surveying – method of running traverses; stadia surveying – methods of locating detail, plane table, simple curves.

Term 1 Sept. 13 Sat. 0900-1200
12 weeks

continues:

Term 2 Jan. 17 Sat. 0900-1200
18 weeks 2.5 Units

51.504/604 ASTRONOMY 1

Prerequisite: 51.906 Plane and Spherical Trigonometry

This course is offered as an introduction to astronomy as used by surveyors and should be of particular interest to persons intending to write the professional land surveyor examinations. Through the use of the BCIT planetarium facilities, students should gain a good grounding in star identification.

Outline: The course includes an introduction to practical astronomy, the celestial sphere, the astronomical triangle; universal time, mean solar time, sidereal time; the emphermeris and star almanacs; instruments used in solar and stellar observations; star identification, observations for latitude; observations for time and longitude; observations for azimuth; observations for position.

This course will be offered in 1981/82.

51.505/605 PHOTOGRAMMETRY 1

This course will introduce students to the mechanics of photogrammetry through a combination of theory and practical work. This course should be of particular interest to persons who intend to write the professional land surveyor examinations.

Outline: introduction to photogrammetry; photo interpretation, aerial photographs; cameras; flight-planning for vertical photography; mosaics, principle of stereovision; determination of height from aerial photos; radial line-plotting; oblique photogrammetry, plotting instruments, stereoscopes, photographic laboratory procedures

Term 1 Sept. 10 Wed. 1845-2145
12 weeks

continues:

Term 2 Jan. 14 Wed. 1845-2145
18 weeks 2.5 Units

51.506/606 PHOTO INTERPRETATION AND REMOTE SENSING

This course is designed to give engineers, planners, foresters, geographers, hydrologists, geologists, and agriculturists the application and interpretation of aerial photographs and other remote sensor acquired data as they are applied to their respective fields.

Upon completion students will have a working capability in image interpretation from photographic (camera) imagery, near infrared imagery, thermal infrared imagery and radar imagery.

Outline: This course will cover the application of photographic systems in remote sensing, imaging, non-imaging sensors, the elements of technique of image interpretation, imagery interpretation equipment, mapping from remote sensor acquired data, terrain and mineral assessment and evaluation, forest land inventory and assessment, water resources evaluation, soils evaluation and assessment, urban environment inventory and analysis, analysis and application of aerial photos and other remote sensing data to engineering (route location, regional and site analysis).

Term 1 Sept. 9 Tue. 1845-2145
12 weeks

continues:

Term 2 Jan. 13 Tue. 1845-2145
18 weeks 2.5 Units

51.507/607 SURVEY DRAFTING

Outline: lettering, technical sketching, scribing, use of ink and various drafting materials; preparation of preliminary plans, topographical plans; subdivision plans; right-of-way plans in accordance with General Survey Instructions of B.C. Land Surveyors.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks

continues:

Term 2 Jan. 12 Mon. 1845-2145
12 weeks 2.0 Units

51.511/611 SURVEY COMPUTATIONS 2

Prerequisite: 51.501/601 Survey Computations 1

This is the second course in Survey Computations.

Outline: compound and reverse circular curves, transition curves, vertical curves, areas and volumes; partitioning of land; crandall adjustment of traverses; eccentric, linear and angular observations; intersection; resection (three point problem); inaccessible base; application of analytical geometry in surveying; programmable calculators.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks

continues:

Term 2 Jan. 13 Tue. 1845-2145
18 weeks 2.5 Units

51.512/612 FIELD SURVEY 2

Prerequisite: 51.502/602 Field Survey 1 or instructor's permission

The course is designed for students who progress from Field Survey 1 or for students who have had similar field experience in industry. The student should have knowledge of theodolite and level operations and chaining, i.e., the basic techniques which are taught in Field Survey 1. It is also assumed that the student will have knowledge of survey computations similar to that acquired in Survey Computations 1.

Outline: horizontal and vertical control by triangulation and trigonometric levelling, computing and laying out circular curves and spirals, topography by self-reducing tachometers, highway surveying involving laying out centre line and vertical curves, cross-sections and slope stakes, precise levelling, electronic distance measurement and instrument adjustments.

Term 1 Sept. 13 Sat. 0900-1200
12 weeks

continues:

Term 2 Jan. 17 Sat. 0900-1200
18 weeks 2.5 Units

51.521/621 SURVEY COMPUTATIONS 3

Prerequisite: 51.511/611 Survey Computations 2

This is the third course in survey computations. Upon completion of the three courses a student can expect to have obtained the knowledge required to write the B.C. Land Surveyors Computations examination.

Outline: Geometrical Geodesy – shape and dimensions of the earth, spherical computations (Legendre's theorem, method of additaments), ellipsoidal computations (Gaussian mid-latitude formulae, Puissant formulae), reduction of field observations in geodesy, trigonometric levelling. Map Projection – theory of distortions, classification of projections, conical projections (Lambert's conformal projection), cylindrical projections (Mercator and Transverse Mercator projection), azimuthal projections (stereo-

graphic), Universal Transverse Mercator Projection; Polyconic projection of British Columbia. Least Square Adjustment – matrix algebra, errors of measurement, measures of precision and accuracy, propagation law of standard errors, principle of least squares (method of conditional observations, variation of independent parameters, adjustment of traverses). Physical Geodesy – gravitational force, equipotential surface, absolute and relative measurements of gravity, reduction of gravimetric observations (free-air, Bouguer, topographic and isostatic reductions), Stoke's theorem, orthometric and dynamic heights, geodetic systems.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks

continues:

Term 2 Jan. 15 Thur. 1845-2145
18 weeks 2.5 Units

51.540/640 ENGINEERING SURVEYING

This 30-week survey course covers a wide range of field techniques and office procedures. By adroit uses of methods and instruments, we can make maps, charts, profiles, measure land boundaries, and determine precise sizes, shapes, and locations. A further purpose is to lay out or mark the desired position and elevation of objects to be built or placed as directed by a completed plan.

On completion of the course the student will be able to show confidence in the manipulation of a variety of survey instruments and the application of survey methods and skills as used in industry today.

We expect to have students with varying backgrounds of education and industrial experience so there is a good deal of course flexibility. Do not feel the following list of subjects and topics is going to be too difficult. Feed-back from former students indicates that in the main they have achieved the level of learning they needed or wanted. The course is arranged so that most time is spent outdoors learning field methods and the use of instruments, less time is spent in the classroom (usually during inclement weather) calculating and plotting a variety of exercises and information from the student's own field data.

Outline: measurements of distances and determination of direction; use of transits, levels, chains, stadia (including tachometers); route survey and earth work, site surveys, construction surveys (layout and control), topographic surveys, introduction to photogrammetry; computations relating to traverses, triangulation and adjustments, areas and volumes, horizontal curves, grades and slopestaking; preparation of topographic plans, plan-profile plates and cross-section plotting. Interpretation of legal plans and survey note-keeping.

Term 1 Sept. 13 Sat. 0900-1200
12 weeks

continues:

Term 2 Jan. 17 Sat. 0900-1200
18 weeks 2.5 Units

51.906 PLANE AND SPHERICAL TRIGONOMETRY FOR SURVEYORS

This course is offered both as an introductory and a refresher course for anyone who has to do any surveying or astronomy calculations. The course should be of special interest to persons intending to write the preliminary examinations for BCLS articles or for persons wishing to continue into astronomy.

Outline: trigonometric functions of acute angles; solution of triangles, use of calculating machines; logarithms, trigonometric functions of any angle; trigonometric formulas and identities; radian measure; inverse trigonometric equations; introduction to spherical trigonometry; solution of right spherical triangles; applications of spherical trigonometry to the terrestrial sphere, celestial sphere, astronomical triangle.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

51.908 DESCRIPTION OF DEEDS

A basic course in writing legal land descriptions for B.C., aimed at helping those preparing for BCLS final examinations.

Term 2 Jan. 15 Thur. 1845-2145
12 weeks 1.0 Unit

51.909 CALCULATORS (PROGRAMMABLE)

This course is designed for students in Mathematics, Physics and Engineering subjects, to learn the most effective use of portable calculators.

Outline: manual use of calculators; use of stack and storage registers, problems involving trigonometry, log and exponential theory, statistics, flowcharts and elementary programming techniques, sub routines, conditional branching; recording and loading programs.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 15 Thur. 1845-2145

51.910 LAND USE CONTROL

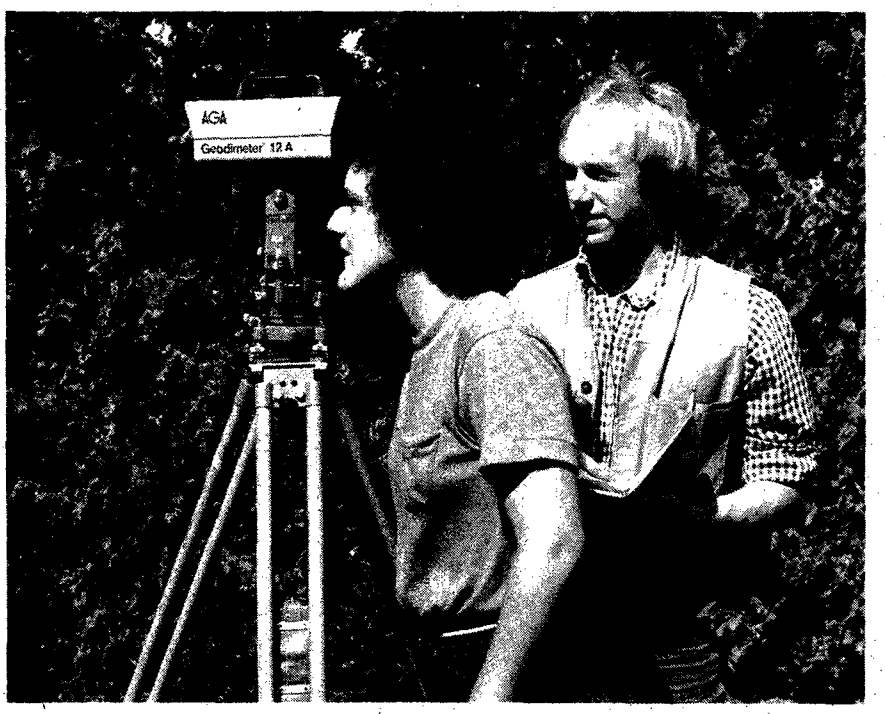
This course will provide, for those who are involved or interested in many aspects of land control, a solid base of knowledge about land and its regulation. It will be of particular interest to those involved in municipal engineering and planning departments, surveyors, appraisers, developers, real estate agents and construction departments of utility companies.

This course will assist in the understanding of how the development and subdivision of land is controlled in B.C. How regulated use of this basic resource impacts on our jobs, lives and the environment will also be explored.

Outline: the approach will primarily be technical, with emphasis being given to the means of control. Specific provincial statutes including the Municipal Act and the Land Registry Act and Municipal Regulations such as zoning and subdivision bylaws will be reviewed. Land values, factors affecting their change, and the part that they play in providing a base for municipal revenue will be considered. Practical aspects of land use control will be illustrated by examples of specific subdivision and development schemes.

The number of students will be limited to 30. Early registration is recommended.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit



CORE

Fees: Course fees for all regular course offerings are on page 4 .

Weeklong Courses: are identified by  . For complete listings, see pages 14 and 15 .

Downtown Courses: are identified by  . For dates and times, see pages 16 to 18 .

CORE DIVISION

CHEMISTRY

30.204 CHEMICAL LABORATORY TECHNIQUES

Prerequisite: 30.902/903 Chemical Principles 1 and 2 or equivalent

This is a day school course. Students require permission of the Department Head to attend.

This laboratory course will allow persons with some chemistry background to improve their analytical techniques.

Outline: Topics include basic techniques in sampling, weighing, moisture determination, ashing, extraction, filtration gravimetric and volumetric methods. Instrumental analysis and separation methods will be described, demonstrated and whenever possible, practiced.

1.5 Units

30.305 CHEMICAL INSTRUMENTATION 1

This course will allow persons engaged in chemical and related industries to understand and to perform the simpler aspects of servicing and maintenance of common chemical instruments.

Outline: electrodes and transducers, electrical components, power supply modules; pH meters, potentiometric recorders, colorimeters, gas chromatographs. Laboratory work consists of examination of components, calibration, and fault-finding on instruments.

This course will be offered in 1981/82.

30.405 CHEMICAL INSTRUMENTATION 2

Prerequisite: 30.305 Chemical Instrumentation 1

This course will allow persons with some background in instrumental analysis to understand basic signal-processing techniques and to construct some useful auxiliary circuits.

Outline: fundamentals of operational amplifiers, methods used in detecting equivalence points in potentiometric titrations, coulometric titrators, integrators in polarography, and gas chromatography; uses of logarithmic amplifiers, and analogue to digital converters. Laboratory work consists of construction and evaluation of instruments described in lectures.

This course will be offered in 1981/82

30.510/610 ANALYTICAL CHEMISTRY

This course will introduce the student to basic concepts, methods, and techniques used in "wet chemistry" and instrumental analysis. The course will be of interest to individuals working in a variety of chemical laboratories, and who wish an understanding of common methodology and techniques.

Outline: Topics covered in lectures include sample decomposition, data treatment, precipitation and complexometric titrations, solvent extraction, ion exchange, and fire assaying. Laboratory exercises include the wet analysis of Fe, Cr, Sn, Cu, As, S, SiO_2 and fire assaying for Au and Ag.

Term 1 Sept. 8 Mon. & Tue. 1845-2145
12 weeks 2.0 Units

continues:

Term 2 Jan. 12 Mon. & Tue. 1845-2145
18 weeks 3.0 Units

30.902/903 CHEMICAL PRINCIPLES 1 and 2

Prerequisite: Students should have at least Chemistry 11 or equivalent standing

This course will allow persons with little chemistry background to understand the basic concepts and techniques of chemical analysis. Emphasis is on practical application of chemical theory to laboratory problems.

Outline: chemical symbols, molarity, normality, balancing of equations, acid-base reactions, redox reactions, theory of volumetric solubility equilibrium, colligative properties, electrochemistry and organic chemistry.

Term 1 Sept. 8 Mon. & Wed. 1845-2145
12 weeks 2.0 Units

continues:

Term 2 Jan. 12 Mon. & Wed. 1845-2145
18 weeks 3.0 Units

30.905 ORGANIC CHEMISTRY 1

30.906 ORGANIC CHEMISTRY 2

These courses will be offered in 1981/82

30.909 PRE-ENTRY CHEMISTRY

(See page 143)

30.913 GAS AND LIQUID CHROMATOGRAPHY

This course introduces students to the use of gas chromatography (GC) and high performance liquid chromatography (HPLC) in solving organic analysis problems. Applications of GC and HPLC are found in energy, chemical, food and forest industries as well as laboratories concerned with environmental and clinical work.

Outline: separation theory; instrument operation and trouble shooting; quantitative and qualitative analysis; columns, detector application and sample preparation.

Term 2 Jan. 12 Mon. 1845-2145
12 weeks 1.0 Unit

30.914 MASS SPECTROMETRY

This course will be of interest to individuals who are presently working in analytical laboratories and require more knowledge of the application and instrumentation of mass spectrometry.

Upon successful completion of this course students will be more familiar with the use and application of a mass spectrometer.

Outline: instrumentation, clinical environmental and industrial applications; combination analytical techniques (Gas/Liquid Chromatography – Mass Spectrometry).

This course is offered at the Downtown Campus only.

30.918 LABORATORY SAFETY AND ORGANIZATION

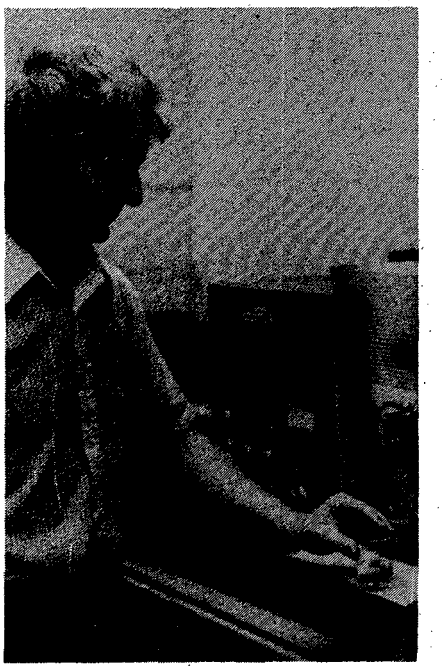
This course will enable the following people to manage science laboratories efficiently and safely using a scientific approach to overcome inherent problems and dangers: (a) laboratory assistants, technicians, teaching assistants, and science support staff in education establishments; (b) stores personnel in industry, research organizations, schools, hospitals, colleges, and universities; (c) laboratory assistants and technicians in industrial and research laboratories (d) secondary school students, graduates.

Outline: This course will consist of lectures, laboratory instruction and open discussion on the general rules, dangers and precautions from general operations, chemicals, poisons and explosions.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 13 Tue. 1845-2145



ENGLISH

31.900 ENGLISH FUNDAMENTALS

This is a basic course for students wishing to upgrade their ability to write correct and effective English.

Students will review the fundamentals of clear and effective writing and will develop practical language skills.

Outline: planning and organizing techniques, elements of effective paragraphs, sentence structure and word choice. Students will do written exercises at every session.

Note: This course requires a level of English language proficiency approximately equivalent to Grade 12. It is not designed to diagnose and remedy second language difficulties.

Term 1 Sept. 11 Thur. 1845-2145
Sept. 13 Sat. 0900-1200
12 weeks

begins again:

Term 2 Jan. 14 Wed. 1845-2145
Jan. 17 Sat. 0900-1200

begins again:

Term 3 Apr. 9 Thur. 1845-2145

31.902 BASIC BUSINESS AND TECHNICAL COMMUNICATION

This course is for those wishing to improve their basic communication skills. It is an excellent first course for those who have had little formal training in business and technical communication. Students will learn the basic concepts and skills necessary to communicate effectively in the business and industrial world.

Outline: The course will cover basic principles of effective style and organization, appropriate formats for letters, memos, and reports, oral reporting, telephone and interview techniques, dictating skills.

Note: Students with basic English language difficulties will be referred to other, more appropriate courses.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 3 Apr. 8 Wed. 1845-2145

31.905 READING IMPROVEMENT AND STUDY SKILLS

This course is designed for those who wish to improve their work-related reading skills. It is also appropriate for those planning to return to school.

Students will learn to adapt their reading styles to the job at hand, to improve their reading rate and comprehension, and organize and use information they read.

Outline: This course emphasizes the development of reading rate and comprehension. Major skills taught include pre-reading, surveying, skimming and scanning, note-taking and related learning and thinking techniques.

Note: Students with basic English language difficulties will be referred to other, more appropriate courses.

Term 1 Sept. 9 Tue. & Thur. 1845-2045
Oct. 21 Tue. & Thur.
6 weeks

begins again:

Term 2 Jan. 13 Tue. & Thur. 1845-2045
Feb. 24 Tue. & Thur.

31.910 BUSINESS AND TECHNICAL CORRESPONDENCE

This course is for anyone who wishes to improve letter and memo writing skills. Those who now, or soon will have letter and memo writing duties at work will find the course especially relevant.

Outline: effective letter and memo style and organization, and techniques for completing the writing task efficiently. Specific types of correspondence covered includes sales letters, collection letters, application letters and resumes, and a variety of memoranda.

Note: Students with basic English language difficulties will be referred to other, more appropriate courses.

Term 1 Sept. 8 Mon. 1845-2145
Sept. 11 Thur. 1845-2145
Sept. 13 Sat. 0900-1200
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 12 Mon. 1845-2145
Jan. 13 Tue. 1845-2145

begins again:

Term 3 Apr. 6 Mon. 1845-2145

31.911 BUSINESS AND TECHNICAL REPORT WRITING

This course is designed to improve the report writing skills of persons presently employed, or intending to be employed in business or industry.

The organization and presentation of a variety of reports will be discussed, and practised. Particular attention will be given to those types of reports selected by the students as best meeting their vocational needs.

Outline: collecting and using data, organizing report format and structure, summarizing using graphics and developing an effective report writing style.

31.912 BUSINESS REPORT WRITING

This course is appropriate for those who wish to improve their ability to write effective business reports.

Students will learn to report business information clearly and convincingly.

Outline: collecting and using data, organizing report format and structure, summarizing, using graphics and developing an effective business writing style.

Note: Students with basic English language difficulties will be referred to other, more appropriate courses.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 15 Thur. 1845-2145

31.914 TECHNICAL REPORT WRITING

This course is designed for those who need to write technical, engineering, or scientific reports.

Students will learn how to report technical and scientific information clearly, effectively, and quickly.

Outline: collecting and using data, organizing report format and structure, summarizing, using graphics and developing an effective technical writing style. Specific types of reports covered will be determined by the vocational needs of the students.

Note: Students with basic English language difficulties will be referred to other, more appropriate courses.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 15 Thur. 1845-2145

31.920 BUSINESS AND TECHNICAL REPORT WRITING – ADVANCED

This is an advanced course designed for those who already have formal training or experience in writing reports, and who want to improve their skills or solve particular problems related to report writing. It is a seminar/workshop course, giving participants the opportunity to work on reports they bring from the job. Much of the instruction will be on a one-to-one basis. The course will also feature case studies and lectures.

Outline: report format, logic, summarization, problem solving and topic development.

Note: Students with basic English language difficulties will be referred to other, more appropriate courses.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks 1.0 Unit

31.922 WRITING FOR THE COMPANY: PROFESSIONAL WRITING AND EDITING SKILLS

This course is designed to help anyone in a position requiring major writing or editing skills, including those whose duties include editing the work of others, writing for public consumption, preparing manuals or documentation and other major writing jobs. The course is designed so that students with either technical or non-technical writing backgrounds will profit from it.

Outline: editing, writing specialized documents (manuals, proposals, house journals, etc.), supervising the writing of others and printing-related topics (layout, graphics, etc.).

Term 1 Jan. 14 Wed. 1845-2145
12 weeks 1.0 Unit

31.930 ORAL REPORTING

Students will improve their confidence and ability to communicate orally in interviews, meetings, group discussions and formal presentations.

Outline: one-to-one oral skills, meeting strategies and procedures, effective participation in informal discussions, and techniques for organizing and delivering oral presentations. Students will be given the opportunity to practise their oral skills in all these areas.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks 1.0 Unit

WEEKEND SPECIALS

These 18-hour courses are intended for those who now occupy positions that require communication skills or who intend to move into such positions and who want to upgrade these skills in short, intensive workshops.

All weekenders will run as workshop courses. Instructional segments will be followed by workshop periods during which participants will be able to practice new skills under the supervision of the instructor. All workshops will have limited enrolment so that the instructor can help the participants individually. Participants are urged to bring material from the job to work during these workshop sessions.

Note: Students with basic English language difficulties will be referred to other, more appropriate courses.

31.970 WRITING FOR RESULTS

This is an 18 hour weekend course for those who wish to improve their letters, memos, reports and other major forms of written communication. Participants will learn easy-to-use techniques to make their writing clearer, better organized and more effective in getting the job done.

Oct. 31 Fri. 1800-2200
Nov. 1 Sat. 0900-1700
Nov. 2 Sun. 0900-1700
0.5 Unit

begins again:

Feb. 20 Fri. 1800-2200
Feb. 21 Sat. 0900-1700
Feb. 23 Sun. 0900-1700
0.5 Unit

31.972 WRITING REPORTS

This 18 hour weekend workshop will begin with how to organize the report writing task efficiently and will then cover selection and organization of information, effective use of formats and layout, analysis of the audience, reporting factual information and making recommendations. Participants will be able to choose either a technical or a business focus in the workshop exercises.

Nov. 21 Fri. 1800-2200
Nov. 22 Sat. 0900-1700
Nov. 23 Sun. 0900-1700

begins again:

May 1 Fri. 1800-2200
May 2 Sat. 0900-1700
May 3 Sun. 0900-1700
0.5 Unit

31.976 WRITING EFFECTIVE LETTERS

This 18 hour weekend course is for those whose major writing task is letters. It will deal with clear, effective and appropriate letter style and organization, and apply these principles to various types of letter writing jobs, including sales letters, collection letters, inquiries and general letters, claim and adjustment letters and application letters.

Mar. 6 Fri. 1800-2200
Mar. 7 Sat. 0900-1700
Mar. 8 Sun. 0900-1700
0.5 Unit

31.979 TELEPHONE COMMUNICATION TECHNIQUES

This 18 hour weekend course is designed for anyone who uses the telephone as a basic communication tool – for sales, administration or personal uses. It is designed to teach the same skills taught in the successful "phone-power" course offered to long-distance customers of the TransCanada Telephone System.

Outline: It covers how to plan, make and follow up the call; how to use the telephone to find prospective clients; how to set up meetings; how to answer inquiries; and how to use the telephone to manage time effectively.

Oct. 3 Fri. 1800-2200
Oct. 4 Sat. 0900-1700
Oct. 5 Sun. 0900-1700
0.5 Unit

begins again:

Jan. 16 Fri. 1800-2200
Jan. 17 Sat. 0900-1700
Jan. 18 Sun. 0900-1700

31.996 COMPREHENSIVE READING, WRITING AND STUDY SKILLS

(See page 143)

31.997 EFFECTIVE WRITING

(See page 143)

31.998 TEXTBOOK READING AND STUDY SKILLS

(See page 143)

31.999 ENGLISH AS A SECOND LANGUAGE

(See page 143)

MATHEMATICS

32.931 CALCULUS 1

Prerequisites: 32.901, 32.902 and 32.903

This is an introductory course in calculus and its technical applications involving the differentiation and integration of algebraic functions. Some of the topics included are related rates, curve sketching, applied maxima and minima, areas, volumes, centroids, and moments of inertia.

Text: "Basic Technical Mathematics with Calculus", A.J. Washington (Cummings), 3rd Edition

Term 1 Sept. 8 Mon. & Wed. 1845-2145
12 weeks 2.0 Units

begins again:

Term 3 Apr. 6 Mon. & Wed. 1845-2145

32.932 CALCULUS 2

Prerequisite: 32.931 or equivalent

Further calculus and technical applications involving differentiation and integration of trigonometric, logarithmic, and exponential functions. Included in the course are the conics, power series, partial differentiation, and an introduction to differential equations.

Text: "Basic Technical Mathematics with Calculus", A.J. Washington (Cummings), 3rd Edition

Term 2 Jan. 14 Mon. & Wed. 1845-2145
12 weeks 2.0 Units

32.507/607 PROBABILITY AND STATISTICS 1

An introduction to statistical methods and their application to technological problems.

Outline: organization and graphical representation of data; frequency distributions; measures of central tendency – the arithmetic mean, the median, the mode, quartiles, deciles, percentiles; measures of variation – the mean deviation, the standard deviation, quartile deviation, introduction to probability; the rules of addition and multiplication; random variables; mathematical expectation; theoretical distributions; the binomial distribution; the Poisson distributions; the normal distribution curve and use of tables to obtain normal curve areas; populations and samples; sampling techniques; sampling distributions; problems of estimation; small samples and Student's t-distribution; confidence intervals; tests of hypotheses; types of error; operating characteristic curves; linear regression; method of least squares; correlation.

Note: This course require a working knowledge of mathematics at the Grade 12 level

Term 1 Sept. 10 Wed. 1845-2145
12 weeks

continues:

Term 2 Jan. 12 Wed. 1845-2145
12 weeks 2.0 Units

32.508/608 PROBABILITY AND STATISTICS 2

Prerequisite: 32.507/607 Probability and Statistics 1

Further hypothesis testing; the Chi-square distribution; analysis of variance and experimental design; non-parametric statistics, non-linear and multiple regression; introduction to quality control.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks

continues:

Term 2 Jan. 14 Wed. 1845-2145
12 weeks 2.0 Units

32.509/609 INTRODUCTORY NUMERICAL METHODS AND COMPUTER PROGRAMMING

Prerequisite: 32.931 Calculus 1

These units cover a course on introductory numerical methods, together with computer programming techniques

the nature of numerical methods algorithms, iterative methods in the solution of algebraic and transcendental equations; matrix methods, systems of linear equations and their solutions; the Gauss-Jordan method; numerical integration trapezoidal and Simpson's rules; Taylor's series and the numerical solution of elementary differential equations. The emphasis is on technical problems and computer programming methods are presented which allow numerical solutions to be processed on the IBM 370 system.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks

continues:

Term 2 Jan. 15 Thur. 1845-2145
12 weeks 2.0 Units

32.933 CALCULUS 3

Prerequisite: 32.932 Calculus 2

A course in differential equations, with emphasis on technical applications throughout. First order differential equations; variables: separable, homogeneous, linear, and Bernouilli's. Second order differential equations with constant coefficients; complementary functions and particular integrals. The D operator. Miscellaneous methods of solving differential equations.

Term 3 Apr. 6 Mon. & Wed. 1845-2145
12 weeks 2.0 Units

32.522/622 MATHEMATICS 1 FOR ELECTRICAL TECHNOLOGY

Prerequisite: 32.950 Pre-Entry Mathematics or recent Algebra 12

A course on the theory of linear circuit analysis with application in the electrical and electronics fields.

Outline: solutions of systems of equations by determinants; Gauss-Jordan, and matrix methods; solving electrical circuits problems using loop and nodal analysis, leading into the development of the necessary trigonometry for solving steady state AC circuit problems, i.e. radian measurement, trigonometric functions, and graphing sinusoidal waveforms; an introduction to phasors and complex numbers.

Text: "Electric Circuits", J.A. Edminster; Schaum's Outline Series

Term 1 Sept. 8 Mon. 1845-2145
Sept. 9 Tue. 1845-2145
Sept. 11 Thur. 1845-2145
12 weeks

continues:

Term 2 Jan. 12 Mon. 1845-2145
Jan. 13 Tue. 1845-2145
Jan. 15 Thur. 1845-2145
12 weeks 2.0 Units

32.524/624 MATHEMATICS 2 FOR ELECTRICAL TECHNOLOGY

Prerequisite: 32.522/622 Mathematics 1 for Electrical Technology

A course on the theory and application in the electrical and electronics field.

Outline: a continuation of trigonometric functions and complex numbers applied to solving AC circuit problems; the use of the complex conjugate, sine and cosine laws, trigonometric identities, algebra, logarithms and exponential functions, and their use in transient circuit and signal power problems; introductory differential and integral calculus of basic algebraic functions.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks

continues:

Term 2 Jan. 15 Thur. 1845-2145
12 weeks 2.0 Units

32.526/626 MATHEMATICS 3 FOR ELECTRICAL TECHNOLOGY

Prerequisite: 32.524/624 or equivalent

A course in calculus and its application in the electrical and electronic fields.

Outline: functions and graphs; rates of change and the derivative; higher derivatives; maxima and minima; the differential and small changes; the differentiation of algebraic products, quotients, and composite functions, integration, the indefinite and definite integrals involving algebraic functions; the differentiation and integration of trigonometric, exponential, and logarithmic functions.

Term 1 Sept. 11 Thur. 1845-2145
12 weeks

continues:

Term 2 Jan. 15 Thur. 1845-2145
12 weeks 2.0 Units

32.528/628 MATHEMATICS 4 FOR ELECTRICAL TECHNOLOGY

Prerequisite: 32.526/626 Mathematics 3 for Electrical Technology or equivalent

A course in further calculus and its application in the electrical and electronic fields.

Outline: brief review of essential calculus items offered in courses 32.526/626; calculus of hyperbolic functions; special integration

techniques; partial derivatives; first and second order differential equations.

Term 1 Sept. 8 Mon. 1845-2145
12 weeks

continues:

Term 2 Jan. 12 Mon. 1845-2145
12 weeks 2.0 Units

32.530/630 LAPLACE TRANSFORM METHODS FOR ELECTRICAL TECHNOLOGIES

Prerequisite: 32.528/628 Mathematics 4 for Electrical Technology

Development of a table of Laplace transform pairs for functions and operations. Finding inverse transforms, tables of transforms, partial fractions, simple order, double order, and complex poles; poles and zeros; circuit problems; single loops with DC inputs; R-L, R-C, and R-L-C; initial condition voltage generators; d-domain circuit diagrams; analysis of circuits in the s-domain (AC and DC); review of determinants and Cramer's Rules; self and mutual impedances; driving point and transfer impedances, transients in multimesh circuits; transfer functions and frequency responses; as well as selected topics from control engineering.

Text: "Transform Circuit Analysis for Engineering and Technology" by Stanley

This course will be offered in 1981/82.

32.540/640 MATHEMATICS FOR ELECTRICAL TECHNOLOGY

Prerequisite: a strong mathematics background is assumed

An accelerated course based on the material covered in 32.522/622 and 32.524/624 and open only to students currently registered in 43.529/629 Electrical Circuits AC/DC and 32.522/622 Mathematics 1 for Electrical Technology.

Note: Students should register in 32.522/622 and transfer will be arranged after 5 weeks. The classes will be scheduled on a Wednesday evening for the remaining weeks.

Term 1 Oct. 22 Wed. 1845-2145
7 weeks

continues:

Term 2 Jan. 14 Wed. 1845-2145
12 weeks 2.0 Units

32.900 ALGEBRA 1

A review of appropriate mathematical topics designed especially as a preparation for Algebra 2. The course is tailored to meet the individual needs of the students in the class.

Text: "Introduction to Technical Mathematics", A.J. Washington (Cummings)

TO ASSIST IN THE CORRECT PLACEMENT OF STUDENTS IN EITHER 32.900 OR 32.901, A DIAGNOSTIC TEST BASED ON THE CONTENT OF 32.900 WILL BE GIVEN TO ALL STUDENTS IN THE FIRST MEETING OF 32.900 AND 32.901.

Term 1 Sept. 8 Mon. 1845-2145
Sept. 9 Tue.
12 weeks

begins again:

Term 2 Jan. 12 Mon. 1845-2145

begins again:

Term 3 Apr. 6 Mon. 1845-2145

32.901 ALGEBRA 2

Prerequisite: 32.900 Algebra 1 or recent Math 12

A course in the application and theory of algebraic equations and functions as used in engineering technologies. Such equations and functions will be considered from both analytical and graphical points of view. The program will include an introduction to right triangle trigonometry.

Text: "Basic Technical Mathematics with Calculus", A.J. Washington (Cummings) 3rd Edition.

Term 1 Sept. 8 Mon. 1845-2145
Sept. 9 Tue. 1845-2145
Sept. 13 Sat. 0900-1200
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 12 Mon. 1845-2145
Jan. 13 Tue. 1845-2145

begins again:

Term 3 Apr. 6 Mon. 1845-2145

32.902 LOGARITHMS AND ANALYTIC GEOMETRY

Prerequisite: 32.901 Algebra 2

A study of the theory and applications of common and natural logarithms. Emphasis will be placed on the plotting of logarithmic and semilogarithmic graphs and their interpretation and use.

An introduction to analytic geometry; in particular a study of the geometrical and practical properties of the conic sections. A brief consideration of quadratic surfaces will be included.

Text: "Basic Technical Mathematics with Calculus", A.J. Washington (Cummings) 3rd Edition

Term 1 Sept. 8 Mon. 1845-2145
Sept. 9 Tue. 1845-2145
Sept. 13 Sat. 0900-1200
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 12 Mon. 1845-2145
Jan. 13 Tue. 1845-2145

begins again:

Term 3 Apr. 6 Mon. 1845-2145

32.903 TRIGONOMETRY

Prerequisite: 32.901 Algebra 2

A course for students in Engineering Technologies in the application and theory of trigonometric functions.

Outline: right angle trigonometry, vector and triangle problems, trigonometric identities and graphing, polar coordinates, transformations and radian measure.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks 1.0 Unit

begins again:

Term 2 Jan. 12 Mon. 1845-2145

begins again:

Term 3 Apr. 7 Tue. 1845-2145

32.950 PRE-ENTRY MATHEMATICS

See page 143 for course description and start dates.

32.X95 REMEDIAL MATHEMATICS (correspondence)

See page 143 for course description

32.957 STATISTICAL QUALITY CONTROL WITH INDUSTRIAL APPLICATIONS

Prerequisite: 32.507/607 Probability and Statistics 1 or equivalent

Applications of statistical methods to quality control of industrial product, quality contrd charts; acceptance sampling.

Texts: "ASTM Manual on Quality Control of Materials", and "ASTM Military Standard 105D-Sampling Procedures and Tables for Inspection by Attributes" U.S. Government Printing Office)

Term 1 Sept. 9 Tue. 1845-2145
15 weeks 1.0 Unit

32.990 LINEAR ALGEBRA AND NUMERICAL ANALYSIS P.ENG.

(See page 142) This course is offered in even numbered years only.

32.993 COMPUTER SCIENCE P.ENG.

(See page 142) This course will be offered in odd numbered years only.

32.994 VECTOR ANALYSIS AND DIFFERENTIAL EQUATIONS P.ENG.

(See page 142) This course will be offered in odd numbered years only.

32.997 PROBABILITY AND STATISTICS P.ENG.

(See page 142) This course will be offered at BCIT's Downtown Campus only.

32.998 CALCULUS P.ENG.

(See page 142) This course will be offered in even numbered years only.

PHYSICS

33.404 MINING GEOPHYSICS

Prerequisite: 33.508/608 and 33.509/609 Physics 1 and 2 or equivalent and first year university geology desirable

This course is designed to give a broad understanding of the use of geophysics in mineral exploration to prospectors, geologists and other mining company personnel. The subject is presented from the following viewpoints: a) the theory behind the uses of each geophysical method; b) instrumentation and field procedures; c) interpretation.

Outline: general survey planning; SP, resistivity and IP methods; magnetic and gravity methods; electromagnetic methods; radiometric methods; seismic methods; and down-hole methods.

Term 1 Nov. 12 Wed. 1845-2145
15 weeks (plus four 3-hour Sat. field sessions) 1.5 Units

33.508/608 PHYSICS 1

Prerequisite: Mathematics 12 or Algebra 12, Physics 11 desirable. This course along with 33.509/609 is designed to satisfy the background knowledge of physics required in various engineering and related technologies.

Outline: kinematics, linear and rotational dynamics, statics, properties of matter, heat, thermodynamics, and waves.

Text: "Elements of Physics", 9th Edition, Smith & Cooper, McGraw-Hill, 1979

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

continues:

Term 2 Jan. 12 Mon. 1845-2145
12 weeks 1.0 Unit

33.509/609 PHYSICS 2

Prerequisite: 33.508/608 Physics 1 or equivalent

This course completes the sequence designed to satisfy the background knowledge required in the various engineering and related technologies.

Outline: sound, light and optics, basic electricity and magnetism, basic semiconductor theory and atomic and nuclear phenomena.

Mathematical treatment requires algebra and trigonometry and possibly some calculus.

Text: "Elements of Physics", 9th Edition, Smith & Cooper, McGraw-Hill, 1979

Term 1 Sept. 8 Mon. 1845-2145
12 weeks 1.0 Unit

continues:

Term 2 Jan. 12 Mon. 1845-2145
12 weeks 1.0 Unit

Note: 33.508/608, 33.509/609 Physics 1 and 2 will count as credit for any of the following BCIT Day School Physics courses.

33.101/201 General Physics
33.102/202 Physics for Biological Science Technology
33.106/206 Physics for Electrical Technology
33.107/207 Physics for Civil and Structural Technology
33.110/210 Physics for Medical Laboratory Technology
33.212 Environmental Physics
33.114/214 Physics for Chemical and Metallurgical Technology
33.115/215 Physics for Survey Technology
33.216 Physics for Mechanical Technology
33.117/217 Physics for Operations Management Technology
33.118/218 Physics for Forest Products Technology
33.219/319 Physics for Building Technology
33.122/222 Physics for Recreational Facilities Management Technology

33.909 PRE-ENTRY PHYSICS

See page 143 for course description and dates.

33.900 THERMODYNAMICS P.ENG. *(see page 142)*

Prerequisite: 33.996 Physics P.Eng. Tutorial or Equivalent

This tutorial is designed to cover the material required for APEBC examination Fund-10 Thermodynamics.

TUTORIALS FOR APEBC FUNDAMENTAL EXAMINATIONS

33.996 PHYSICS P.ENG. *(See page 142)*

This tutorial will cover the material required for the APEBC examination Fund-6 Physics.

33.998 STATICS AND DYNAMICS P.ENG. *(See page 142)*

Prerequisite: First year post-secondary physics

This tutorial will cover the material required for APEBC examination Fund-8 Statics and Dynamics.

ASSOCIATION OF PROFESSIONAL ENGINEERS OF BRITISH COLUMBIA
Fundamental Examination Tutorials

To assist people studying for these examinations BCIT offers tutorials for a number of the fifteen examinations as follows:

APEBC No.	Course Name	BCIT Course No.	Page No.
1	Calculus	32.998	
2	Vector Analysis & Differential Equations	32.994	
3	Linear Algebra & Numerical Analysis	32.990	
4	Computer Science	32.993	
5	Probability and Statistics	32.997	
6	Physics	33.996	
8	Statics and Dynamics	33.998	
10	Thermodynamics	33.990	

Every effort will be made to cover the topics listed in the Association's description of examination topics using a problem solving format.

In addition to the tutorials listed above, BCIT is prepared to offer tutorials for the other fundamentals if a sufficient number of students request it.

Other Fundamentals

Fund-7	Chemistry
Fund-9	Mechanics of Fluids
Fund-11	Engineering Materials
Fund-12	Theory of Circuits and Power Engineering
Fund-13	Strength of Materials
Fund-14	Organic Chemistry

The tutorials listed above may be given if sufficient enquiries are received.

Please direct enquiries to:

Division of Continuing Education and Industry Services
434-5734, local 204 or 205.

Assistant Head, Engineering and Core
Local 724

or

Program Consultant, Engineering and Core
Local 467

TUTORIALS FOR APEBC FUNDAMENTAL EXAMINATIONS

32.998 CALCULUS P.ENG.

Limits, continuity; differentiation and methods of definite and indefinite integration of elementary functions; applications of differentiation and integration to geometric and physical problems; numerical integration including Simpson's rule; indefinite forms; indefinite series including Taylor series; partial differentiation of arc length and curvature; differentiation of a complex valued function of a real variable; multiple integrals and their application.

This course will be offered in 1980/81 and next 1982/83.

Term 1 Sept. 11 Thur. 1845-2145
24 weeks Special Fee

32.994 VECTOR ANALYSIS AND DIFFERENTIAL EQUATIONS P.ENG.

Vector algebra, vector functions and operators; orthogonal curvilinear coordinates; application of partial derivatives, multiple integrals, line and surface integrals; integral theorems. Ordinary differential equations; series solution of differential equations; Laplace transformation; Fourier series.

This course will be offered on Thursdays in 1981/82

32.990 LINEAR ALGEBRA AND NUMERICAL ANALYSIS P.ENG.

Linear transformations; matrices and matrix operations; determinants; simultaneous linear algebraic equations; eigenvalues and eigenvectors. Nonlinear algebraic equations; interpolation and numerical approximations or curve fitting; numerical integration and differentiation; solution of ordinary differential equations.

Term 1 Sept. 13 Sat. 0900-1200
24 weeks Special Fee

This course will be offered in even numbered years only.

32.993 COMPUTER SCIENCE P.ENG.

Candidates must develop familiarity with the FORTRAN language and facility in writing and flow charting computer programs. Organization and characteristics of stored-program computers; basic programming and data representation; program testing; algorithms; computer solution of numerical problems.

This course will be offered on Wednesdays in 1981/82.

32.997 PROBABILITY AND STATISTICS P.ENG.

Concepts of probability, events and populations, probability theorems, concept of a random variable, continuous and discrete random variables, probability distribution, moments, skewness, kurtosis, estimation of moments, joint distributions, probability plotting and testing of distributional assumptions, distribution of functions of a random variable, sampling and statistical estimation theory, hypothesis testing, simple regression analysis, the design of experiments.

Sept. 8 Mon. 1730-2030
18 weeks Special Fee

This course will be offered at BCIT's Downtown Campus, ONLY.

33.996 PHYSICS P.ENG.

This tutorial will cover the material required for the APEBC examination Fund-6 Physics.

Outline: sound; simple harmonic motion, superposition and interference, reflection, standing waves, resonance, propagation and speed of longitudinal waves, sound and acoustics, intensity.

Electricity and Magnetism – electric charge, Coulomb's law, electric field, Gauss' law, electric potential, capacitance, dielectrics, electric current, resistance, DC circuits, magnetic force and field, electromagnetic induction, inductance, electric oscillations, Maxwell's equations, electromagnetic waves.

Light – nature and propagation of light, speed of light, reflection and refraction of light waves, interference, coherence, thin films, interferometer, diffraction, polarization, scattering.

Modern Physics – relativistic kinematics, relativistic dynamics, electromagnetic radiation, wave aspects of material particles, atomic structure, nuclear structure, elementary particles.

This course will be offered in 1982/83.

33.998 STATICS AND DYNAMICS P.ENG.

Prerequisite: First year post-secondary physics, or equivalent. This tutorial will cover the material required for APEBC examination Fund-8 Statics and Dynamics.

Outline: resultant of two and three dimensional concurrent force systems; equilibrium of two and three dimensional non-current force systems; centroids, centres of gravity; second moment of area, moment of inertia; truss, frame and cable analysis; friction; methods of virtual work. Planar kinematics of particles and rigid bodies; work and energy, impulse and momentum for particles and rigid bodies; mechanical vibrations of single degree of freedom systems.

This course will be offered in September 1981.

33.900 THERMODYNAMICS P.ENG.

Prerequisite: 33.996 Physics P.Eng. Tutorial or equivalent

This tutorial is designed to cover the material required for APEBC examination Fund-10 Thermodynamics.

Outline: Thermodynamics states of simple systems; the fundamental relationships of thermodynamics; the first law of thermodynamics; entropy postulates; equilibrium, PVT diagrams; energy of state; compressibility charts and steam tables; calculation of property changes, enthalpy; Helmoltz and Gibbs function; the Maxwell equations; application of thermodynamics; cycles, reversibility; thermodynamics of phase changes, the Clapeyron equation; Gibbs phase rule.

Text: "Fundamentals of Classical Thermodynamics"; Second Edition, 1973, by Van Wylen & Sonntag

Term 1 Sept. 9 Tue. 1845-2145
24 weeks Special Fee

33.998 STATICS AND DYNAMICS P.ENG.

Prerequisite: First year post-secondary physics or equivalent. This tutorial will cover the material required for APEBC examination Fund-8 Statics and Dynamics.

Outline: resultant of two and three dimensional concurrent force systems; equilibrium of two and three dimensional non-current force systems; centroids, centres of gravity; second moment of area, moment of inertia; truss, frame and cable analysis; friction; methods of virtual work. Planar kinematics of particles and rigid bodies; work and energy, impulse and momentum for particles and rigid bodies; mechanical vibrations of single degree of freedom systems.

This course will be offered in September 1981.

BCIT PREPARATORY PROGRAMS

The Division of Continuing Education and Industry Services at BCIT offers non-credit courses in chemistry, physics, English and mathematics which meet the various entrance requirements for BCIT diploma programs.

These courses will be of interest to mature students, students who do not have special prerequisites and students who want to improve their knowledge of core subjects.

Courses may be taken individually or as a package. Students are encouraged to consult with the Continuing Education program consultant if they wish to design a package. Successful completion of individual courses does not guarantee acceptance to day school programs.

Courses will be offered evenings January through April, evenings May through August, and days and evenings June through August. Since all courses may not be available in each time period, students should enquire about exact dates and times from Continuing Education Information.

Students who wish to apply for admission to one of the diploma programs should indicate on their application forms which of these courses they plan to complete. *Successful completion of these courses does not guarantee acceptance to day school.*

Advice on course selection is available from the Program Consultant, Engineering and Core Continuing Education.

The following courses are offered:

CHEMISTRY

30.909 PRE-ENTRY CHEMISTRY (78 hours)

An upgrading course for people whose background in chemistry is weak and a refresher course for those who have not studied chemistry for several years. Meets the Chemistry 11 program entrance requirements for BCIT.

May 18 to Aug. 17, 1981 Mon. & Wed.
1845-2145
Special Fee

ENGLISH

31.996 COMPREHENSIVE READING, WRITING AND STUDY SKILLS (80 hours)

An integrated course which provides extensive coverage of all reading, writing and study skills necessary for successful completion of technology programs.

Jul. 28 to Aug. 22, 1980 Mon. thru Fri.
or
Jul. 27 to Aug. 21, 1981 Mon. thru Fri.
Special Fee

31.997 EFFECTIVE WRITING* (24 hours)

Develops the basic skills of effective writing and their application to business and technical writing. Covers paragraph development, sentence construction and mechanics.

June 2 to June 25, 1981 Tue., Wed., & Thur.
1900-2100
or
Jul. 3 to Jul. 24, 1981 Tue., Wed., & Thur.
0830-1030 or 1100-1300 or 1900-2100
or
Jul. 28 to Aug. 20, 1981 Tue., Wed., & Thur.
0830-1020 or 1100-1300 or 1900-2100
Special Fee

* *Note: For students registered in both 31.997 and 31.998 fees will be reduced.*

31.998 TEXTBOOK READING & STUDY SKILLS* (24 hours)

Develops the skills necessary for success in learning situations. Covers reading textbooks, taking notes, writing exams, managing time.

June 2 to June 25, 1981 Tue., Wed. & Thur.
0830-1030 or 1100-1300 or 1900-2100
or
Jul. 3 to Jul. 24, 1981 Tue., Wed., & Thur.
0830-1030 or 1100-1300 or 1900-2100
or
Jul. 28 to Aug. 20, 1981 Tue., Wed., & Thur.
0830-1030 or 1100-1300 or 1900-2100
Special Fee

* *Note: For students registered in both 31.997 and 31.998 fees will be reduced.*

31.999 ENGLISH AS A SECOND LANGUAGE (280 hours)

A preparatory course for students with English as their second language. Designed to help students deal more effectively with post secondary demands. Equivalent to 098-099 at Vancouver Community College, Special Programs Division. Successful completion satisfies the BCIT English language entrance requirements.

June 15 to Aug. 21, 1981 Mon. thru Fri.
Special Fee

MATHEMATICS

Students are advised to complete any necessary upgrading in mathematics prior to taking Pre-Entry Physics 33.909.

32.950 PRE-ENTRY MATHEMATICS (90 hours)

An upgrading and/or refresher course for students who have either not completed high school math or who have completed it more than three years previously or whose math background is otherwise weak. Meets the Algebra 12 entrance requirements for BCIT. Students intending to enter a BCIT technology which requires Algebra 12 grade of C+ or better must achieve a final mark of 65% or higher in 32.950. Students must have passed Algebra 11 or approved equivalent mathematics course to register.

Jan. 27 to May 7, 1981 Tue. & Thur.
1845-2145
or
May 12 to Aug. 25, 1981 Tue. & Thur.
1845-2145
or
June 1 to Jul. 10, 1981 Mon. thru Fri.
0900-1200
or
Jul. 31 to Aug. 24, 1981 Mon. thru Fri.
0900-1200
or
Jan. 25 to May 5, 1982 Tue. & Thur.
1845-2145
Special Fee

32.X95 REMEDIAL MATHEMATICS (correspondence)

A self-study version of 32.950 Pre-Entry Mathematics. Meets the BCIT Algebra 12 entrance requirements. Students who intend to enter a BCIT technology which requires an Algebra 12 grade of C+ or better must achieve a final mark of 65% or higher in 32.X95. Students must have passed Algebra 11 or approved equivalent mathematics course to register in this course. Students, particularly those who have been away from school for some years, are advised to take Mathematics 32.950, the classroom-format version of this course, if possible, instead of 32.X95.

Contact the Directed Study Centre at BCIT for registration details.

22.900 PREPARATORY BUSINESS MATHEMATICS (48 hours)

A course to upgrade and refresh the mathematical knowledge of students who intend to enter the Business Management Division at BCIT. The course will include arithmetic, elementary algebra, graphical techniques and an introduction to business applications. It will provide students with a suitable prerequisite for the mathematics programs in the Business Management Division and meet the Algebra 11 entrance requirement.

June 2 to Jul. 30, 1981 Tue. & Thur.
1845-2145
or
Jul. 27 to Aug. 24, 1981 Mon. thru Thur.
1845-2145
or
Aug. 17 to Aug. 26, 1981 Mon. thru Thur.
0900-1600
Special Fee

PHYSICS

33.909 PRE-ENTRY PHYSICS (87 hours)

An upgrading course for people whose background in physics is weak and a refresher course for those who have not studied physics for several years. meets the Physics 11 program entrance requirement for BCIT.

Students are advised to complete any necessary upgrading in mathematics prior to taking this course.

Jul. 20 to Aug. 28, 1981 Mon. thru Fri.
1300-1600
Special Fee

HEALTH

Fees: Course fees for all regular course offerings are on page 4 .

Weeklong Courses: are identified by  . For complete listings, see pages 14 and 15 .

Downtown Courses: are identified by  . For dates and times, see pages 16 to 18 .

HEALTH CONTINUING EDUCATION

HEALTH

The department of Health Continuing Education is concerned primarily with the health care worker who has graduated from programs such as nursing and health technologies and who requires and desires upgrading of knowledge and skills to : keep pace with changing technology; prepare for new career opportunities; return to the workforce after an absence of some time; specialize in a particular facet of the field. All courses are offered in the lower mainland and some are available throughout the province through cooperating colleges, interactive instructional television, and directed study. Some of the courses carry credits towards BCIT continuing education certificates, while other courses may be credit-free (participants can request a record of confirmation that they were registered). The department provides educational counselling to any health care worker who is searching for continuing education opportunities.

BCIT Health Care Certificate (15 Units)

The Health Care Certificate program is designed for persons practicing in the health care field, such as graduates of diploma programs in health technologies. The certificate is awarded upon completion of 15 units of credit for continuing education courses in the health sciences and/or health care administration. The participant, by achieving the Certificate in Health Care Management (described below) and then completing a further 7 units, can qualify for the Health Care Certificate which is identified and titled appropriately, for example: Health Care Certificate in Nursing Sciences; Health Care Certificate in Medical Radiography; Health Care Certificate in Administration; Health Care Certificate in Department Management; etc. The electives and transfer credits chosen for the certificate must be approved in advance in writing by a Health Continuing Education program consultant to ensure appropriateness and acceptance.

Health Care Management Program (BCHA Certificate) (8 Units)

This program is offered in cooperation with the British Columbia Health Association (formerly B.C. Hospitals Association) and has the following objectivies:

a) To develop the management skills of department heads, supervisors, head nurses, and assistant head nurses in hospitals and other health care facilities.
b) To develop an understanding of the concept of total health care.
c) To provide skill in applying managerial principles to health care situations.
d) To provide skill in applying the decision-making process to solving supervisory problems.

The program comprises the following three basic elements, which may be taken in any sequence:

87.501/601 Fundamentals of Health Care Management – 2.0 Units
87.502/602 Health Care Management Skills
(formerly Supervisory Methods – 2.0 Units
Courses from the list of electives – 4.0 Units

87.501/601 FUNDAMENTALS OF HEALTH CARE MANAGEMENT

A 24 week (72 hour) course

An introduction to the organization of the health care delivery system and the principles of method study. Objective:

a) To develop an understanding of hospital organization.
b) To review the development of labor relations in the health care environment.
c) To develop an understanding of the principles of union practices and the collective bargaining process.
d) To apply the principles of method study in learning better ways of performing assigned tasks.

Outline: This course uses instructional techniques such as lectures, buzz groups, group discussions, case studies, and projects under supervision. Subjects are total health care environment, labor relations, total hospital organization, and method study.

Term 1 Sept. 9 Tue. 1845-2145
12 weeks

continues:

Term 2 Jan. 13 Tue. 1845-2145
12 weeks 2.0 Units

begins again:

Term 2 Jan. 13 Tue. 1845-2145
12 weeks

continues:

Term 3 Apr. 7 Tue. 1845-2145
12 weeks 2.0 Units

87.502/602 HEALTH CARE MANAGEMENT SKILLS (formerly Supervisory Methods)

A 24 week (72 hour) course

An introduction to the human, technical, and conceptual skills required for health care management. Objectives:

a) To develop an understanding of some basic principles of human behavior.
b) To demonstrate how to apply the principles of leadership and motivation.
c) To develop an understanding of the principles of budgeting.
d) To develop an understanding of one method of problem solving.

Outline: This course uses instructional techniques such as lectures, buzz groups, group discussions, case studies, and projects under supervision. Subjects are communications, leadership, groups, motivation, authority, problem solving, and budgeting.

Term 1 Sept. 10 Wed. 1845-2145
12 weeks

continues:

Term 2 Jan. 14 Wed. 1845-2145
12 weeks 2.0 Units

begins again:

Term 2 TBA 1845-2145
12 weeks

continues:

Term 3 TBA 1845-2145
12 weeks 2.0 Units

List of Suggested Electives

Electives may be chosen from the courses listed in the various technologies that are considered apropriately related. Recognition of training from other institutions or professional associations may be considered (see the policy on transfer of credit (page 7). Electives must be approved in advance in writing by a Health Continuing Education program consultant to ensure their appropriateness and acceptance.

Course No.	Course Title	Unit
10.221	Organizational Behavior 1	1.0
10.321	Organizational Behavior 2	1.0
10.325	Labor Relations 1	1.0
10.425	Labor Relations 2	1.0
10.908	Problem Solving and Decision Making	1.0
10.910	Personnel Management	1.0
10.915	Testing	1.0
10.916	Counselling 1	1.0
10.917	Counselling 2	1.0
10.950	Training Techniques	1.0
14.050	Data Processing – Introduction	1.0
16.140	Accounting 1	1.0
16.904	Accounting for the Manager	1.0
20.906	Public Relations	1.0
22.948	Method Study – Office	1.0
22.943	Performance Measurement	1.0
22.952	Systems and Procedures – Manual	1.0
22.953	Project Planning and Scheduling	1.0
31.910	Business and Technical Correspondence	1.0
31.912	Business Report Writing	1.0
32.507/607	Probability and Statistics 1	2.0

CONTINUING EDUCATION IN HEALTH TECHNOLOGIES

During the year a selection of courses for diploma graduates in the health technologies may be designed and offered, with the cooperation of the BCIT departments of Basic Health Sciences, Environmental Health Services, Health Engineering Services, Medical Laboratory Services, Radiological Technical Services, and other related outside associations and organizations. For further details, contact the department of Health Continuing Education, telephone 434-5734, local 666. The courses developed to date are as follows:

Courses in Environmental Health

82.901 Basic Sound Measurement

An examination of the principles of reduction and control of noise of sound-producing equipment. Prepares those working in the fields of environmental health and public health to operate equipment used in enforcing municipal noise bylaws. Eighteen hours over three Fridays (dates TBA).

Courses in Medical Laboratory Sciences

72.X01 Advanced Haematology

A correspondence course that prepares registered technologists to write the Advanced Registered Technologist examination. Credits are granted for this course by the Canadian Society of Laboratory Technologists (CSLT).

Objective: To acquaint the student with some of the new and advanced theories of haematology.

Outline: This correspondence course examines haem synthesis, globin synthesis, thalessemia, normal red-cell production and destruction, B12 and folic-acid synthesis, megaloblastic anaemias, glucose metabolism of the red cell, haemolytic anaemias, and red cell overproduction and under-production.

The course was designed in cooperation with the B.C. Society of Medical Technologists (BCSMT).

Courses in Radiological Sciences

72.901 Tutorial for CAMRT Registration Examination

A 12 hour refresher course to prepare students for the registration examination of the Canadian Association of Medical Radiation Technologists (CAMRT). A concise review of radiological physics, radiographic techniques, anatomy and physiology, and radiobiology and protection. April 1981 (dates TBA).

72.902 Medical Radiography — Continuing Education

A lecture series conducted by the B.C. Division of CAMRT in cooperation with the Ministry of Health and BCIT. This one week course for graduate radiographers covers advances in many aspects of radiographic technique.

72.903 Radiography and Physics for Radiologists

This two week course is for physicians studying radiology. It introduces fundamentals in the production of radiographs, the physics of radiology, x-ray apparatus, image-recording, and radiological safety.

The purpose of the following courses, designed in cooperation with the B.C. Division of CAMRT, is to prepare registered technicians to write the Advanced Certification examination.

72.906 Radiographic Technique

A preparatory course for advanced certification of radiological technicians.

72.907 Radiobiology and Protection

A directed reading preparatory course for advanced certification of radiological technicians.

72.909 Physics of Medical Radiography

A preparatory course for advanced certification of radiological technicians.

72.910 Advanced Studies in X-Ray Apparatus and Imaging

Courses in Nuclear Medicine Sciences

74.901 Radiopharmaceuticals in Nuclear Medicine

A preparatory course for advanced certification of nuclear medicine technologists.

Provides the graduate nuclear medicine technologist with continuing education in radiopharmaceuticals and post graduate instruction in preparation for the Advanced Certification examination.

CONTINUING EDUCATION IN NURSING (General Nursing, and Psychiatric Nursing)

Continuing education courses and programs for nursing personnel are offered periodically. Information and application forms may be obtained by writing to: Head, Health Continuing Education, BCIT, 3700 Willingdon Avenue, Burnaby, B.C. V5G 3H2, or by telephoning 434-5734, local 376.

Credit courses in Nursing

76.901 Refresher Course for Graduate Nurses

This 334 hour full-time course is for graduates of approved schools of general nursing who require updating to qualify for registration or employment. Theory and clinical practice are combined to assist the nurse to meet clinical competency objectives. Medical and surgical nursing of the adult is the major focus. Apply as stated above to place your name on the mailing list for scheduled courses, giving confirmation of your eligibility for registration with RNABC.

This ten week course is offered three to five times in the year. 5.0 Units

This course is also offered in a part-time format. For more information call 434-5734, local 376.

76.902 Basic Mental Health Nursing

Graduate nurses trained in other countries may be directed to this course by the RNABC to prepare them for the Registered Nurse examination. Available only by waiting list. This is a ten week course. 5.0 Units.

76.906/907 Operating Room Nursing — Level 1

This two-part course prepares the Registered Nurse for staff nurse duties in hospital operating rooms. Beginning level skills are developed primarily for graduates of two-year diploma programs; however, this course is also of value as a refresher for former operating room nurses. Apply as stated above to place your name on the waiting list. This course is divided into two parts: Part 1 includes 90 hours of instruction; Part 2 is 300 hours (10 weeks). 5.0 Units.

Nursing Update Program (credit-free courses)

As the needs for continuing education of nursing personnel are identified, BCIT will design and conduct appropriate courses. Short courses are being planned for Registered Nurses and Registered Psychiatric Nurses. Watch for course announcements in the RNABC Continuing Education Bulletins and the RPNABC issues "This Month". Check your hospital notice boards for postings about new courses or have your name placed on our brochure mailing list by writing to: Planner, Nursing Update, Health Continuing Education, BCIT, 3700 Willingdon Avenue, Burnaby, B.C. V5G 3H2, or by telephoning 434-5734, local 843.

76.909 Enterostomal Therapy: The Role of the Nurse

This two-day course provides the nurse with the knowledge and skills required for the care of patients with stomas and other non-stomal skin problems.

76.911 Caring for the Elderly

An evening series for those persons providing care to the elderly in extended-care and intermediate-care facilities, in personal care homes, and in the community.

76.913 Intravenous Therapy

A two-day course designed especially for R.N.'s currently working in an area where they could be required to start IV's.

76.914 Anatomy and Physiology: Review and Update

A 10-week course (one evening each week for a total of 25 hours) for RN's, RPN's, and other health professionals who have had a course in anatomy and physiology but who want to review and update their knowledge.

76.915 Basic Principles of the Disease Process

A 10-week course (one evening each week for a total of 25 hours) for RN's, RPN's, and other health professionals already familiar with normal physiology. The emphasis of this course will be on those principles of pathophysiology which are common to a class of diseases.

76.918 Behavioral Concepts in Psychiatric Nursing

A six-week course (one evening per week for a total of 12 hours) for RPN's and RN's who wish to become familiar with selected behavior patterns and related nursing interventions.

Maternity Nursing Series

A series of evening lectures on topics of interest to nurses working in maternity units.

BCIT BOARD OF GOVERNORS

The institute is governed by a fifteen-member board appointed by the Lieutenant-Governor in Council.

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First Vice-Chairman:	Marie Taylor Manager of Training and Development B.C. Region, Simpson-Sears Limited
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	John E. Leech, Dipl.T., C.E.T. Executive Director Society of Engineering Technologists of B.C.
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	Paul C. Trussell, Ph.D. Director, B.C. Research
	Hugh B. Weydert President, International Association of Machinists and Aero Space Workers
	Joseph L. Whitehead President and Publisher Journal of Commerce
	Vacancy – Member to be appointed
Secretary to the Board:	Patricia Maertz, Local 865
	Please direct all communications to the Board through the Secretary to the Board.

CONTINUING EDUCATION STUDENT COMMITTEE

Andre Buller	CBC TV Technician
Susan Dumbrell	Domglass Inc. Personnel Department
Denis Kontonis	Federal Government Grain Commission
Jim Murray	Canada Immigration Center Vancouver International Airport
Gerald Paul	B.C. Telephone Company CCG Salesman
Geoff Sale (Chairman)	AEL Microtel Ltd. Process Engineering
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BCIT Ex-Officio Members

D.M. Brousson ..... Dean, CEIS
B.D. Yeoell ..... Coordinator, Planning & Development
D.H. MacLaurin ..... Manager, Marketing & Information
R.C. Morris ..... Head, Health Continuing Education
L.S. McGill ..... Head, Business Continuing Education
J.A. Willcox ..... Head, Engineering/Core Continuing Education
W.D. Robertson ..... Head, Distance Education
R.C. MacGregor ..... Head, Industry Services

C.E.I.S. ADVISORY COMMITTEE

Members	Company & Address
Mr. R.B. Einblau Chairman	Manpower Devt. Supervisor Manpower Devt. Department B.C. Hydro #6 – 1045 Howe Street Vancouver, B.C. V6Z 2B1
Mr. H.B. Hedley Vice-Chairman, Business	Training Engineer Outside Plant B.C. Telephone Company 8th Floor 650 West Georgia Street Vancouver, B.C. V6B 4N8
Mr. D. Deane Vice-Chairman, Health	Director of Personnel St. Paul's Hospital 1081 Burrard Street Vancouver, B.C. V6Z 1Y6
Mr. P.W. Waddington, P.Eng. Vice-Chairman, Engineering	Manager of Engineering Support G.T.E. Lenkurt Electric (Canada) Ltd. 7018 Lougheed Highway, Burnaby, B.C. V6B 4N8

Mr. N. Henderson	Head, Trg. Ind. Section Ind. Trg. Division Employment & Immigration Commission Royal Centre, 1055 West Georgia Street P.O. Box 11145 Vancouver, B.C. V6E 2P8
Mr. A.J. Blakeney	Aluminum Company of Canada Box 1800 Kitimat, B.C.
Mr. J.E. Leech	Registrar Society of Engineering Technologists of B.C. #203 – 4400 Dominion Street Burnaby, B.C. V5G 4G3
Mrs. Pat Wadsworth	Executive Director B.C. Health Association 440 Cambie Street Vancouver, B.C. V6B 2N6
Lorraine Larson	Personnel Development Asst. C.P. Air Vancouver International Airport Vancouver, B.C. V7B 1V1
Mr. A.F. Park	Senior Training & Safety Officer Ministry of Highways 5th Floor 940 Blanchard Street Victoria, B.C. V8W 3E6
Mr. W. Eccleston	Director of Personnel Municipality of Surrey 14145 56th Avenue Surrey, B.C. V3W 1J2
Dr. F. John Blatherwick	Director Simon Fraser Health Unit 644 Poirier Street Coquitlam, B.C. V3J 6B1
Mr. Ted Gwartney	Commissioner B.C. Assessment Authority 1537 Hillside Avenue Victoria, B.C. V8T 4Y2
Ms. Jan Kotaska	Coordinator, Patient Education Shaughnessy Hospital c/o 5911 Sandpiper Court Richmond, B.C. V7E 3P8
Mrs. Angela Bell-Irvine	Management Development Coordinator Hyatt Hotels 655 Burrard Street Vancouver, B.C. V6C 2R7

Ex-Officio Members

G.R. Sale (Chairman, Student Committee) ..... AEL Microtel Ltd.
Process Engineering

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DIVISION OF CONTINUING EDUCATION AND INDUSTRY SERVICES ADMINISTRATION

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Brian Yeoell, C.Eng., M.I.C.E., Coordinator, Planning and Development
Don MacLaurin, B.Sc.F., R.P.F., Manager, Marketing and Information

PROFESSIONAL AGENCIES OF INTEREST TO PART-TIME STUDENTS

The Society of Engineering Technologists of British Columbia (SETBC)

Most engineering technology courses offered through the B.C. Institute of Technology, Division of Continuing Education and Industry Services are recognized for credit toward certification with the society. The society is currently completing a full and formal accreditation of BCIT's day programs, and once complete, will re-assess all continuing education courses. When each course is re-assessed and found to be acceptable, the course description will contain the notation "accredited by the Society of Engineering Technologists of B.C.". If you are unsure as to whether you will gain credit toward certification, and want to ensure you are embarking on an acceptable program, please contact the society office.

SETBC is a professional society registering and certifying technicians and technologists in the engineering, physical science and resource technologies in B.C. Certification with the society is primarily dependent on academic qualifications in accordance with national standards; however, credit is granted for extensive experience. A minimum of two years' technological experience is required for certification. Registered Certified Engineering Technicians and Certified Engineering Technologists are recognized in industry by the designation "CET" after their names.

Until the end of 1977, SETBC made certification at three levels, including that of senior engineering technician. Since January 1, 1978 the society certifies only at the technician and technological levels. To provide a reasonable transition from the three-level to the two-level certification system, the following schedule of academic requirements for certification at the engineering technician level has been established.

Academic Required for Technician Certification

Applications Post-Marked	SETBC Exams	Hours	BCIT Units
January 1, 1980 - December 31, 1980	10	720	20
January 1, 1981 - December 31, 1981	11	790	22
January 1, 1982	12	850	26

For further details, write to SETBC for a copy of their Two-Level Certification Policy dated December 1, 1977.

Academics Required for Technologist Certification

The academic requirement at the technologist level is a Diploma of Technology, or equivalent, unchanged from the former system.

The requirement for reclassification from the technician to the technologist level will be established by the SETBC Board of examiners based on the date of application and according to the above schedule. Persons not qualified at the technician or technologist level are encouraged to join as associate members.

In evaluating an application for membership and certification the SETBC Board of Examiners, which comprises Certified Engineering Technologists, Professional Engineers, Professional Agrologists, Professional Foresters and others, take into consideration career training other than that received at BCIT, including foreign qualifications.

The Board of Examiners is responsible for recommending certification levels and providing the applicant with a program of studies required to progress to the next certification level. The board therefore recommends that to ensure full credit toward certification, an application be submitted to the society before beginning a program of studies.

Please note that the processing of applications generally takes four months.

The society is incorporated under the Societies Act of British Columbia. Briefly, its objectives are:

- To provide formal recognition in the form of certification for engineering technologists and engineering technicians in B.C.
- To provide a controlled, qualified, and responsible body of certified engineering technologists and engineering technicians, thus obtaining recognition of the profession in industry.
- To act as the vehicle whereby its members may increase their knowledge and skills in appropriate technologies.
- To offer placement and education services, technical literature, special group insurance and other group benefits inherent in all such organizations.

In accordance with these general objectives, the society actively represents technicians and technologists in B.C. Its activities include the promotion of technological programs

offered by BCIT's Division of Continuing Education and Industry Services and community colleges; the presentation of briefs leading to the development of directed study courses in technology, including a program to aid the technologist in becoming an engineer, the development of an accreditation program to aid in the maintenance of the highest educational standard; and most recently, working toward appropriate recognition in law for its members.

Persons interested in the society should write to: **Director of Membership Services, The Society of Engineering Technologists of the Province of British Columbia, 203 – 4400 Dominion Street, Burnaby, B.C., V5G 4G3,** or telephone **(604) 433-0548.**

The Association of Professional Engineers of British Columbia

The Association of Professional Engineers of British Columbia has a formal examination system leading to registration for students who, after careful consideration and investigation, find they cannot attend university. It should be stressed that this program of association examinations is not an easy way to qualify academically as a professional engineer. The program comprises about 26 examinations, which cover approximately the same material as a four-year engineering course at a university. To complete the whole program a candidate would require years of home study.

The association does not offer courses to prepare candidates for these examinations. Some courses offered at the British Columbia Institute of Technology provide one method of assisting students to prepare for the examinations. However, the student should note that the diploma courses at BCIT were not designed specifically for this purpose. A student embarking on the association's examination program should seek advice from the Association of Professional Engineers to ensure that a course taken at BCIT will provide a reasonable amount of assistance in studying for a course in the association's syllabus. The syllabus contains course outlines, so that comparison of content may be made with the content of BCIT courses. For further information contact: **The Association of Professional Engineers of British Columbia, 2210 West 12th Avenue, Vancouver, B.C., V6K 2N6,** or telephone **(604) 736-9808.**

Association of British Columbia Professional Foresters

Arrangements exist whereby students may prepare themselves to become professional foresters, in part through courses at BCIT. Interested students are advised to contact the: **Association of B.C. Professional Foresters, Suite 406 – 837 West Hastings Street, Vancouver, B.C., V6C 1B6,** or telephone **(604) 687-8027.**

The Association of British Columbia Professional Foresters was founded in 1947 under enabling legislation entitled the British Columbia Foresters Act, April 3, 1947. The act was revised subsequently and the association now operates under authority of the British Columbia Professional Foresters Act – 1970 and the association's by-laws which were amended in January, 1975 and again in January, 1977.

Some of the requirements for registration include appropriate academic qualifications, a minimum of four years of acceptable forestry experience in the opinion of the Board of Examiners, Canadian citizenship or permanent resident status and references from at least three Registered Professional Foresters (RPF). Also, pupils are required to submit the name of one RPF as a sponsor. All applicants for registration are required to write a special examination on the "Policy and Administration of B.C. Forest Resources". Pupils are also required to submit a "Professional Report".

Briefly, the objectives of the association are as follows:

- To ensure that the forests of British Columbia are managed by professionally qualified foresters.
- To promote those policies of integrated use of forest land for timber production, recreation, wildlife and water management which ultimately provide the greatest social and economic returns to society.
- To advise the public and government of implications of policies affecting uses of forest land.

To date, the association's objectives have been implemented in various ways, including the submission of recommendations to appropriate authorities on numerous topics such as inventories, protection, timber management, water management, fish and wildlife management, range management, forest research, forest taxation, and forest education.

The Corporation of Land Surveyors of the Province of British Columbia

The Corporation of Land Surveyors of British Columbia is the controlling agency for professional land surveyors within the province and has a board of examiners that set formal examinations for entry into the profession.

There are three main approaches to becoming a professional land surveyor, each of which requires grade 12 standard as a prerequisite. They are:

1. Pass the corporation's preliminary examinations, become articled to a B.C. land surveyor for four years and pass the corporation's intermediate and final examinations.
2. Graduate from BCIT, or an equivalent institute, become articled to a B.C. land surveyor for three years and pass the corporation's intermediate and final examinations.
3. Graduate with a bachelor's degree in civil engineering, or the equivalent, from a recognized university, then become articled for two years and pass the corporation's intermediate and final examinations.

The corporation does not offer courses to prepare candidates for these examinations.

Some of these courses at BCIT are designed to enable candidates to take these examinations, while others prepare candidates for them.

Enquire about B.C. land surveyor examinations and courses from: **The Corporation of Land Surveyors of B.C., 101 – 655 Douglas Street, Victoria, B.C., V8V 2P9,** or telephone **(604) 382-4323.**

The Canadian Institute of Quantity Surveyors

The Canadian Institute of Quantity Surveyors has an academic program comprising 22 separate subjects. Credit may be obtained as follows:

1. Graduates from the full-time day school Building Technology (Economics Major) at BCIT receive credit for 13 of the 22 subjects. Candidates for these 13 subjects may arrange to attend BCIT day school if there is space in the program.
2. Credit will be granted for seven of the remaining nine subjects for successful completion of evening courses through the Division of Continuing Education and Industry Services.
3. Preparatory courses for writing the CIQS final examination for the remaining two subjects are also held in the evening by the Division of Continuing Education and Industry Services.

Before signing for any subjects at BCIT, you must obtain approval of prospective credit from: **The Chairman, Education Committee, Quantity Surveyors Society of B.C., 1250 Homer Street, Vancouver, B.C., V6B 2Y5,** or telephone **(604) 681-0296.**

The Architectural Institute of British Columbia

The Architectural Institute of British Columbia, in association with the Royal Architectural Institute of Canada, has an apprenticeship system generally referred to as the Syllabus of Studies Program. This program lists 22 examinations or submissions for completion.

BCIT day school graduates receive credit for a number of syllabus courses. The program will take a BCIT graduate from 5 to 8 years to complete. Entry to the program is restricted to applicants in the employ of a registered architect.

The program is generally completed by self-study, however syllabus students may elect to take BCIT courses through the Division of Continuing Education and Industry Services for credit towards syllabus subjects.

Before signing for any subjects at BCIT, you must obtain approval of prospective credit from: **The Coordinator, Syllabus of Studies Program, Royal Architectural Institute of Canada, Second Floor, 448 Seymour Street, Vancouver, B.C., V6B 3H3,** or telephone **(604) 669-9830.**

The Canadian Institute of Management

Students meeting the admission requirements of, and becoming members of the Canadian Institute of Management may complete all four years of the CIM certificate course in management and administration through courses offered in cooperation with the Division of Continuing Education and Industry Services. This course is suited to men and women for whom a university degree is not feasible. The CIM course provides

participants with a broad understanding of the major disciplines of management science and how they inter-relate. The personal contact with other practicing managers having a variety of business backgrounds will be of value in developing solutions for some of the student's own business situations.

The method of instruction employs both lectures and case discussions, thus affording the student the valuable experience of expressing his opinions to other class members through open discussion of assigned problems.

Entry into year four is permitted only after completion of the requirements for years one, two and three. See page for details of the certificate program.

As the identical course is offered in twenty-three course centers across Canada, students may transfer, either temporarily or permanently, to another course center at no additional charge for the current year. Student members of CIM are encouraged to take part in various Vancouver branch activities and will receive our national publication "The Canadian Manager" as well as local newsletters.

Generally speaking the following criteria will fulfill CIM admission requirements:

1. Candidates must have grade 12 education (or equivalent) with a minimum age of 24 and a minimum of two years supervisory experience or four years staff experience.
   or
2. Higher than grade 12 level of formal education – be at least 23 years old – have a minimum of least two years supervisory experience or four years of staff experience.
   or
3. Community college in Management Sciences; be at least 22 years old; no supervisory experience required.
   or
4. University graduate, immediately upon graduation with no experience required.

For further information please contact: **The Canadian Institute of Management, 3179 Beacon Drive, Coquitlam, B.C.,** or telephone **(604) 464-8737.**

Purchasing Management Association of Canada

The Purchasing Management Association of Canada assists members to develop their skills in the purchasing profession. Membership is open to qualified people in purchasing and related fields.

Following are the steps required to achieve the Professional Purchaser Diploma:

1. Registration with PMAC before December 31, 1981
2. Principles of Buying course
3. Inventory and Production Planning course
4. Principles of Traffic and Transportation
5. Twelve PMAC seminar credits
6. Management studies courses •
7. Five years of practical experience
8. Board of Examiners interview
9. Professional Purchaser Diploma.

BCIT cooperates with the B.C. District of the PMAC in presenting the following Management Studies courses approved by the association for credit

Management Studies

Office sequence:

22.948	Method Study – Office
22.952	Systems and Procedures – Manual
22.954	Project Study – Office

or

Manufacturing sequence:

22.941	Method Study – Manufacturing
22.943	Performance Measurement
22.944	Project Study – Manufacturing
20.180/280	Marketing 1 and 2
10.905	Managerial Styles
10.221	Organizational Behavior 1 (formerly Management Psychology 1)
10.924	Management by Objectives
16.140	Accounting 1
16.443	Management Accounting

The four-year Canadian Institute Program listed in this calendar also is accepted as credit for the Management Studies portion of the diploma program. For information on on PMAC, telephone **(604) 683-6811** or write to: **L.R. Davidson, P.P., Chairman, Professional Development, Purchasing Management Association of Canada, 640 West Broadway, Vancouver, B.C., V5Z 1G4.**

For information on BCIT courses, telephone (604) 434-5734, local 204 or 205, or write to: **The Division of Continuing Education and Industry Services, BCIT, 3700 Willingdon Avenue, Burnaby, B.C., V5G 3H2.**

The Certified General Accountants' Association of British Columbia

The Certified General Accountants' Association of British Columbia offers a program of studies leading to the professional designation, "Certified General Accountants" (CGA).

The association will recognize BCIT day school courses which have a content substantially similar to courses in the CGA program. Students who obtain a grade of 65 per cent or better will be granted credit for such courses towards the completion of the CGA program.

Courses offered in the evening by the Division of Continuing Education and Industry Services (CEIS) will also be considered for exemption where they are essentially equivalent to the day courses listed below.

The following courses have been accepted for transfer credit:

CGA Courses	BCIT Day School	CEIS Courses
Accounting 101	16.140/240	16.140/240 or 16.918 (accelerated)
Economics 104	10.135/235 10.137/237 10.138/238 10.139/239 10.234/334	10.135/235
Statistics 203	22.210 22.214 22.216 22.220	22.935
Accounting 211/222	16.347/447	16.347/447 or 16.926 (accelerated)
Accounting 311	16.341/441	16.341/441
Finance 316	16.361/461	16.361/461
ICS 325	14.050/052/053 or 14.070/270	14.050/052/505/605

Students are advised to obtain a copy of the CGA exemption policy on a yearly basis to ensure they complete the correct courses and do not overlook any revisions.

Students who wish to present courses other than those listed above should consult the association. Applications for registration must meet all requirements of the association in order to be accepted into the CGA program.

For further information, please contact: **The Certified General Accountants Association of British Columbia, 1555 West 8th Avenue, Vancouver, B.C., V6J 1T5,** or telephone **(604) 732-1211.**

The Institute of Chartered Accountants of British Columbia

The Institute of Chartered Accountants of British Columbia has advised the British Columbia Institute of Technology that it will accept certain courses as meeting the course requirements,
providing a student meets the other prerequisites and requirements and is acceptable to the Institute of Chartered Accountants.

Students who are interested in the Institute of Chartered Accountants of British Columbia should contact: **The Registrar, 562 Burrard Street, Vancouver, B.C., V6C 2K8.**

The following courses have been accepted for transfer credit:

CA Courses	BCIT Day School	CEIS Courses
Financial Accounting (to Intermediate Level)	16.140/240 plus 16.347/447	16.140/240 plus 16.347/447
Economics	10.135/235	10.135/235

Computers in Business	14.050 plus 14.052	14.050 plus 14.052
Statistics	22.216	22.935
Business Application of Mathematics	14.409 or 22.300 or 22.314	22.963
Management and Cost Accounting	16.341/441	16.341/441
Financial Management	16.361/461	16.361/461
Commercial Law	10.360/460	10.360/460
Organizational Behavior	10.324	10.221
Policy and Administration	10.434	

The Society of Management Accountants of British Columbia

The Society of Management Accountants of British Columbia has advised the British Columbia Institute of Technology that it will accept certain BCIT courses as meeting the course requirements, providing a student meets the other prerequisites and requirements and is acceptable to the Society of Management Accountants.

Students who are interested in the Registered Industrial Accountant (RIA) program should contact the society at **(604) 687-5891,** or write to them at **401 – 750 West Pender Street, Vancouver, B.C., V6C 2T7.**

The following courses have been accepted for transfer credit:

RIA Courses	BCIT Day School	CEIS Courses
11. Principles of Accounting	16.140/240	16.140/240 or 16.918
12. Economics	10.135/235 or 10.137/237 or 10.138/238 or 10.139/239	10.135/235
13. Communications and Case Analysis	31.110/210 or 31.114/214 or 31.116/216 or 31.118/218 or 31.120/220 or 31.122/222 or equivalent	31.910/920 or 31.911 or equivalent
14. Data Processing	14.050/052 or 14.160/170/260/270	14.050/052
15. Business Mathematics	22.100 or 22.110 or 22.114 or 22.116 or 22.118 or 22.120	22.100
21. Accounting Theory	16.347/447	16.347/447 or 16.926
22. Commercial Law	10.360/460	10.360/460
23. Organizational Behavior	10.221/231 or 20.381, 10.321 or 20.483, 10.321	10.221/321
24. Taxation		
31. Cost Accounting	16.450	16.912/913
32. Quantitative Methods 1	16.341/441	16.341/441
	22.210 or 22.214 or 22.216 or 22.218 or 22.220	22.935
33. Quantitative Methods 2	22.300, 22.400 or 14.306/409	22.935 and 22.963
42. Finance	16.361/461	16.361/461
43. Selected Topics	No exemption	No exemption
51. Information Systems	Graduation in Systems Option, Computer Systems Technology	

The Municipal Administration Education Council of B.C.

The council has approved a course of studies in municipal administration which is designed to improve the competence of persons working in the field and others who are seeking such employment. It is expected that successful completion of the Municipal Administration Training Program will ensure that the student has fulfilled the academic requirements for accreditation by the B.C. Municipal Board of Examiners. However, a period of practical experience in the field is also required before the board will consider the granting of this certification. The council has designated BCIT as one of the educational institutions to develop and present the courses required in the Municipal Administration Training Program and these are available as follows:

MAEC Courses	BCIT Day School	CEIS Courses	BCIT Directed Studies
Canadian Local Government			
Economic Theory	10.110/210	10.135/235	Principles of Economics
Municipal Law		10.957	
Principles of Accounting	16.140/240	16.904 or 16.140/240	Accounting for Office Managers
Finance and Statistics	16.361	16.350	
Admin. Practice and Techniques	10.100	10.131/232	Principles of Administration
Organization and Human Behavior	10.220/320	10.221/321	
Elements of Personnel Management	10.467/460	10.910	
Labor Relations and Contract Admin.	10.330/430	10.325/425	
Office Systems and Procedures	14.182 and 14.296		
Data Processing	14.050	14.050	
Decision Making		10.908	Decision Making
Communications	31.110/210	31.910	
Report Writing and Public Relations	31.110/210	31.912	Correspondence
Supervisory Skills and Leadership		10.904	

For further information contact: **Directed Study Centre, BCIT, 3700 Willingdon Avenue, Burnaby, B.C., V5G 3H2,** or telephone **(604) 434-5734, local 648.**

The Institute of Chartered Secretaries and Administrators

The Institute of Chartered Secretaries and Administrators (ICSA) with a global membership of over 50,000 is the leading professional body of administration executives recognized in the English-speaking world.

BCIT is pleased to cooperate with this successful organization in enrolling students to follow a program leading to BCIT certification and subsequently through completion of further ICSA directed studies to attain professional designation. There are two classes of membership, Associate and Fellow Members are entitled to describe themselves as Chartered Secretaries and to use the designation ACIS or FCIS. To qualify as a member it is mandatory to pass prescribed examinations and to have appropriate practical experience.

Three specific ICSA program and BCIT equivalencies:

Business Administration Program

Group A – Management Concepts

ICSA Course Name	BCIT Course Number	
1. Principles of Economics	10.135	
2. Principles of Law	10.360	
3. Principles of Accounting	16.140/240	
4. Principles of Administration	10.131/232	
Group B – Creative Management		
5. Decision-making	ICSA	
6. Management Accounting	16.341	
7. Financial Analysis	16.361/461	or
or		
Statistics	22.935	
8. Managerial Economics	10.235	
9. Management of Human Resources	10.221	
or		
Taxation	16.912/913	
Group C – The Role of the Administrator		
10. Commercial Law	10.460	
11. Company Law	ICSA	

12. Company Meetings	ICSA
13. Company Secretarial Practice	ICSA

Federal/Provincial Government Program*

Group A – Management Concepts

ISCA Course Name	BCIT Course Number
1. Principles of Economics	10.135
2. Principles of Law	10.360
3. Principles of Accounting	16.140/240
4. Principles of Administration	10.131/232

Group B – Creative Management

5. Decision-making	ICSA
6. Public Finance	16.350
7. Financial Analysis	16.361/461
or	
Statistics	22.935
8. Managerial Economics	10.235
9. Management of Human Resources	10.221
or	
Taxation	16.912/913

Group C – The Role of the Administrator

10. Canadian Government	ICSA
11. Canadian Public Administration	ICSA
12. Meetings at Common Law	ICSA
13. Administrative Law	ICSA

Municipal and Other Local Government Program*

Group A – Management Concepts

ICSA Course Name	BCIT Course Number
1. Principles of Economics	10.135
2. Principles of Law	10.360
3. Principles of Accounting	16.140/240
4. Principles of Administration	10.131/232

Group B – Creative Management

5. Decision-making	ICSA
6. Local Government Accounting	ICSA
7. Financial Analysis	16.361/461
or	
Statistics	22.935
8. Managerial Economics	10.235
9. Management of Human Resources	10.221
or	
Taxation	16.912/913

Group C – The Role of the Administrator

10. Law of Local Government I	ICSA
11. Law of Local Government II	ICSA
12. Municipal Government Meetings	ICSA
13. Municipal Secretarial Practice	ICSA

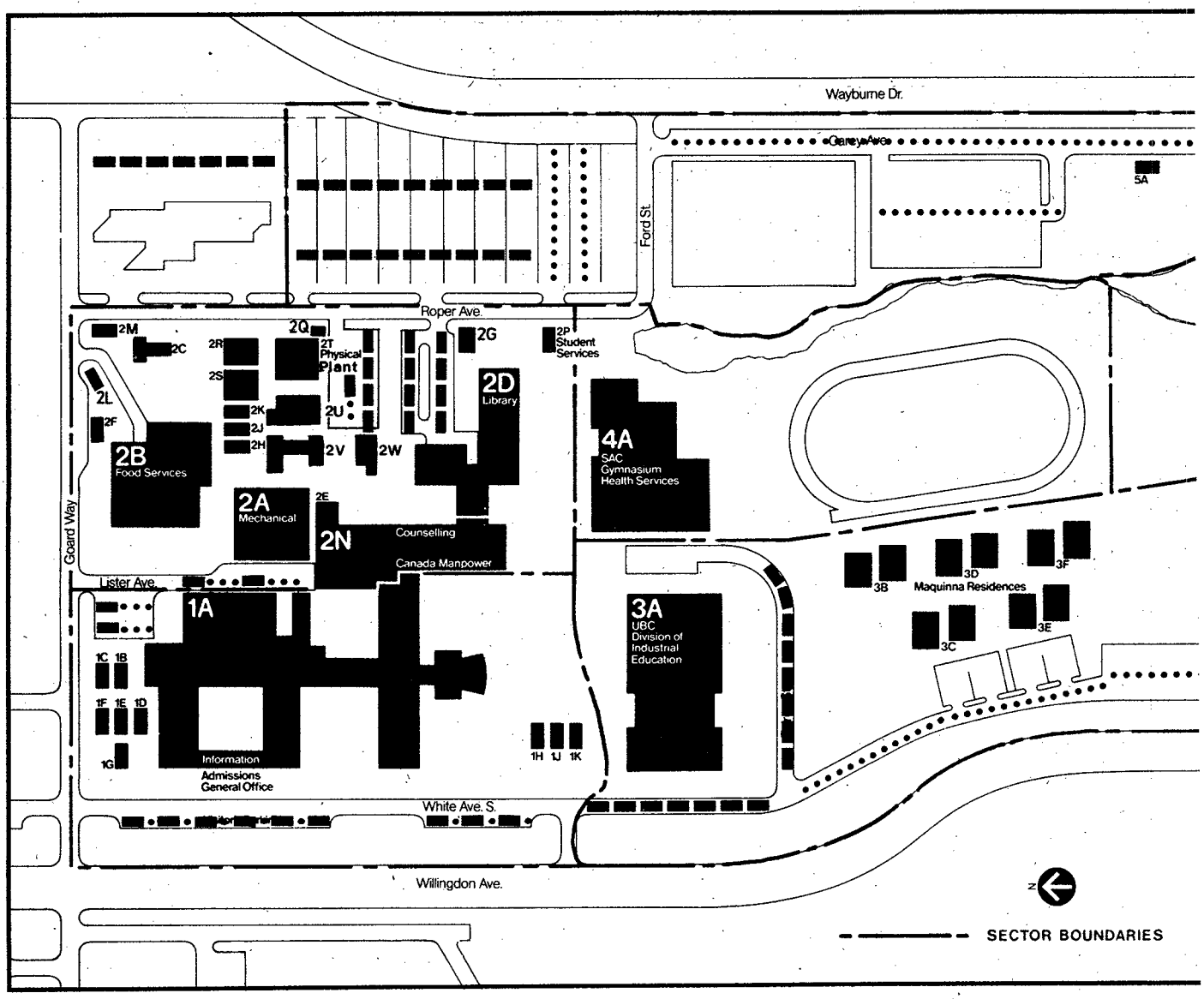
*Subjects are optional to one another if they carry the same number.

ICSA: The programs are presently available by ICSA correspondence only.

INDEX

BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

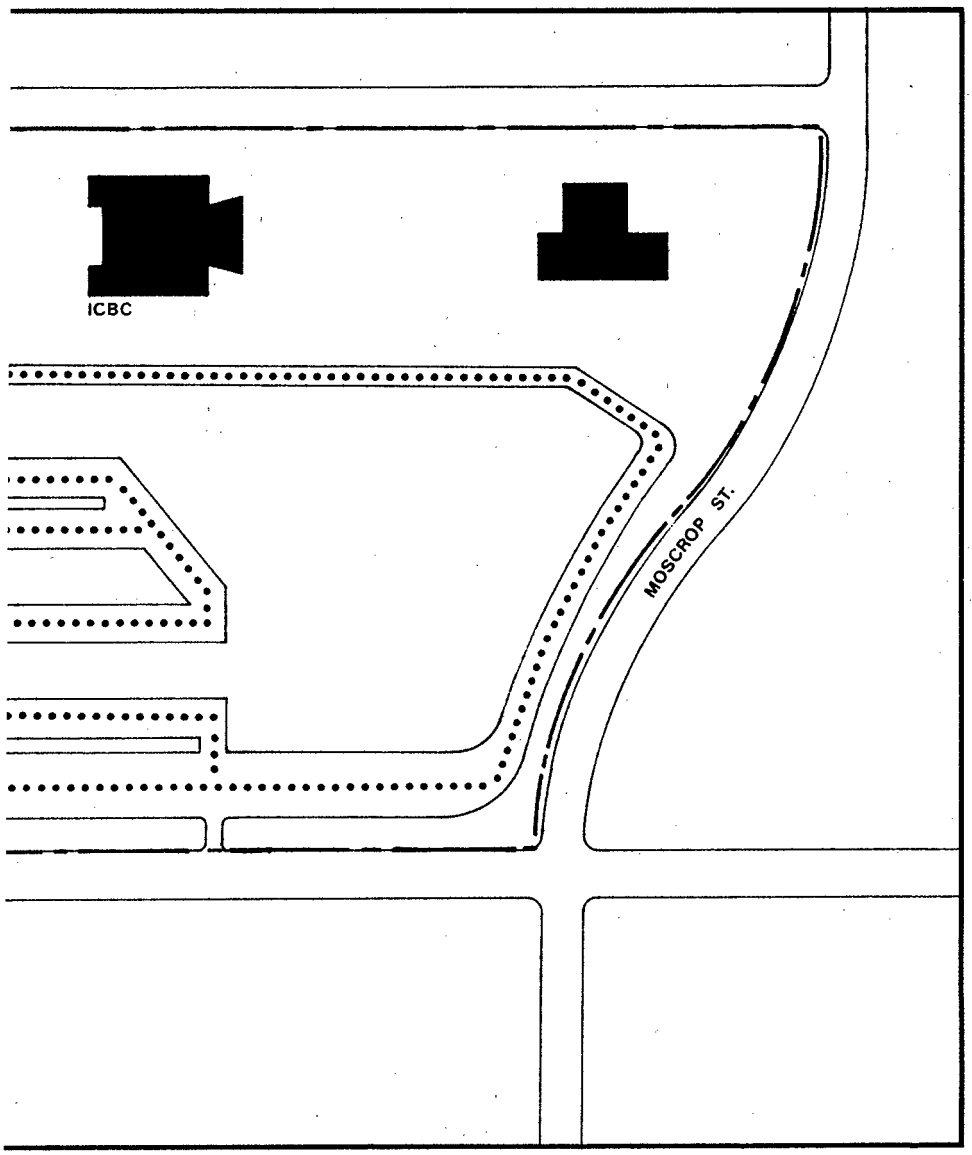
3700 WILLINGDON AVENUE, BURNABY, BRITISH COLUMBIA, CANADA V5G 3H2 AREA CODE 604 434-5734



BUILDING IDENTIFICATION

1A 1962/67 Classroom/Laboratory; Administration; Continuing Education – Admissions and Information
1B Continuing Education – Offices
1C CEIS – Program Development
1D CEIS Division Offices
1E Mathematics
1F Mathematics
1G CEIS Industry Services
1H Nursing
1J Psychiatric Nursing
1K RN and RPN Administration
2A Mechanical
2B Food Services and Training
2C Greenhouse; Animal Holding
2D Library; AV; PEMC; Bookstore
2E Telephone Exchange
2F Electrical Sub-Station
2G PEMC
2H CEIS Distance Education
2J CEIS Directed Study Centre
2K Food Services
2L Food Services
2M Food Training; PVI
2N 1976 Classroom/Laboratory; Computer Centre; Central Stores
2P Student Services
2Q Security and Parking
2R Staff Offices
2S Classrooms
2T Physical Plant
2U Classrooms
2V CEIS Training and Development Centre; Financial Services; Public Relations; Staff Offices
2W Classrooms
3A Interactive Instructional Television Centre
3A Teacher Training Centre
4A Student Activity Centre; Medical Services
5A Loggers Sports

The numbering of buildings conforms to the signage system being developed. The system provides the adaptability essential to future building construction and identification.



PARKING

- Student Scramble – Day and Night
- Staff – Day Only; Scramble after 1730
- Females Driving Alone – Nights
- Instructors Only
- Visitors – Day

BCIT BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

700 Willingdon Avenue, Burnaby, B.C. Canada V5G 3H2 Phone: (604) 434-5734

REGISTRATION FOR CONTINUING EDUCATION AND INDUSTRY SERVICES COURSES

ocial
surance

Application Date Year Month Day

itle: Mr., Miss, Mrs., Ms (circle)

urname

Date of Birth Year Month Day

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First and Middle Initials

Home Phone Number –

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Postal Code

Full-time BCIT Day School Student? Yes No

BCIT Staff Member? Yes No

If working towards a BCIT Certificate, state name of Certificate Program

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ddress

Postal Code

epartment

Business Phone Number – Local

osition

No. of years experience in this field of work

a former BCIT student, check whether Day School Continuing Education

Last grade completed

ountry where attended secondary school

Date of final year at secondary school 19

VISA master charge Card Number

Expiry Date Year Month Day

Type of Post-Secondary Institution	Name of institution	No. of years attended	Graduate Yes	Graduate No
Vocational				
College				
Institute of Technology				
University				
Other				

Reason for taking courses listed below:

- Related to current work
- Preparation for advancement with employer
- Preparation for completely new vocation
- General interest

Payment of fees:

- Full fees to be paid by you
- Paid jointly by you and employer
- Full fees to be paid by employer
- Payment of fees not applicable

e of Course	Course No.	Day of Week	Time	Cost	Downtown Yes	Downtown No	Start Date

APPLICANTS SHOULD NOTE THE FOLLOWING:

1) Register early. Watch for registration deadlines.
2) Course(s) fees must accompany this Registration form. Registration forms not accompanied by fee payment will not be processed.
3) Mailing this Registration Form and payment of fees does not insure a seat in the class.
4) If it is not possible to register you in the class of your choice, your money will be refunded.
5) Program planning assistance is available throughout the year.
6) All cheques or Money Orders should be made payable to BCIT. The **back of the cheque should clearly indicate the Student's Name, Social Insurance Number, and phone number.**
7) Mail in applications must be accompanied by a cheque or money order. In-person registrations may also be made with Chargex or Master Charge.

REGISTRATION FORM
FOR
THE DIVISION OF
CONTINUING EDUCATION
& INDUSTRY SERVICES
COURSES

PLEASE SUBMIT TO:

Division of Continuing Education & Industry Services
British Columbia Institute of Technology
3700 Willingdon Avenue,
Burnaby, British Columbia
V5G 3H2

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BRITISH COLUMBIA
INSTITUTE OF TECHNOLOGY
3700 Willingdon Avenue, Burnaby, B.C. Canada V5G 3H2

To: