Humber

CALENDAR

1985

Humber College of Applied Arts and Technology Calendar for all post-secondary programs, 1985

Humber College

Applied and Creative Arts

100

applied arts and technical programs
communications programs
...ms

200

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400

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500

...chemical programs
electronics programs
environmental systems program
...mechanical programs
marine technology programs
short programs

Humber is your Best-Choice College

As Canada's largest community college, Humber offers 123 programs, all of which take your skills and interests in new directions. Countless opportunities exist for you to develop as fully as you wish. You can study anything from advertising design to yachting studies.

This calendar describes the wide range of day programs offered at Humber as well as admission requirements and course descriptions for each. Because Humber offers so much, chances are you will find the best program for your needs and interests. This calendar can lead you to your best choice.

If you have further questions, contact the Registrar's office at 675-5000.

A1

The Registration Process*

YOU
1) Send your application in before February 15, if possible. After that, all applicants are judged on a first come, first served basis. (Applications are available in your guidance office or by calling Humber at 675-5000).

HUMBER
1a) We will acknowledge your application by the end of the third week in January, or within seven days of receiving it, whichever is later. We will also set up appointments for testing, interviewing or auditions if they are required and send the information to you along with the letter of acknowledgement.

YOU
2) A confirmation fee of $50.00 is required fourteen days after the date of your acceptance letter.

HUMBER
2a) The first "offers of admission" are mailed on April 1, 1985. We will send you an admission package which includes parking, locker, bookstore and other orientation information, along with your acceptance letter.

YOU
3) Your full fee payment is due by July 19.

HUMBER
3a) We will send you the last information package before you start classes. It will include your student identification card and the time and place of your first class.

YOU
4) You are ready to begin College. If you have any questions or problems, please call us at 675-5000.

*May differ with certain programs or with special circumstances.

If you are considering applying to Humber, read this section carefully for general admissions information and then read the specific admissions requirements described under the program in which you are interested. Some programs require interviews, tests or special personal qualities. Be sure you understand what these requirements are.

For all full-time diploma programs and most certificate programs, you must have an Ontario Secondary School Graduation Diploma (Grade 12) or equivalent. OR, if you are at least 19 years old and a Canadian citizen or permanent resident, you can apply as a mature student (see below).

Because we receive more than 20,000 applications, it is important for you to respect all admission deadlines. In several popular programs, a missed deadline could mean withdrawal of your application, and your place will be offered to someone else. We do keep waiting lists, but this is not a guarantee for admission.

How To Apply To Humber College

1. Starting November, application forms are available in the guidance office of your high school or local College of Applied Arts and Technology (CAAT). Read it carefully, and fill it out as soon as possible. You will receive instructions from your guidance office. Remember that you must arrange to have the transcript of your final grades sent to our Registrar's Office as soon as it is available. The date will be stated in your letter of approval.

2. If you are a mature student, you may have to meet with an Admissions Officer to determine if you will require academic upgrading before you are accepted in a program.

February 15 Application deadline: for popular programs, a late application is a disadvantage.

January – April is the period during which most interviews and assessments are scheduled, where applicable.

April 1 and on is roughly the time when you will receive your answer, through the mail, if you applied before February 15

Priority of Admission

Students will be admitted to colleges of applied arts and technology in the following order of preference:

1. Permanent residents of Ontario
2. Permanent residents from other Canadian provinces
3. Overseas students from Commonwealth countries
4. Students from other foreign countries.

A Few Specific Notes About Admissions

Short Programs

Most of our short certificate programs, which are described at the end of each section, are approved for sponsorship by the Canada Employment and Immigration Commission. If you qualify for sponsorship, the cost of your tuition fees will be paid by them, and you will get a weekly training allowance. Contact your nearest Canada Employment Centre for more details. You must have been out of school for at least 12 months to qualify.

Part-time Studies

As a part-time student you are allowed to take a maximum of 15 credits. If you are interested in enrolling in a part-time evening program, pick up a copy of our Continuing Education Guide at our Registration Centre or phone 675-5005.

Weekend College

You can also study on weekends because a few diploma programs are offered on Saturdays and Sundays.

Applicants Outside Ontario

If you attended high school in another province or country, you must prove that your educational standing is equivalent to the Ontario Secondary School Graduation Diploma. Normally, it means grade 11 everywhere in Canada, except in British Columbia, New Brunswick and Prince Edward Island where the equivalent is grade 12.

If you are a visa student and your first language is other than English, please include the results of the TOEFL (Test of English as a Foreign Language) with your application. For details, write to Educational Testing Service, Box 899, Princeton, NJ 08540, U.S.A.

Advanced Standing

You may qualify for advanced standing for grade 13 and/or post secondary courses. Once classes have commenced, please see an Admissions Clerk in the Registrar's Office for possible exemptions.

Campus Tours/Secondary School Liaison

Students often find that a tour of the College helps to understand what life at Humber is all about. You can arrange a tour of the entire college, or of one specific program area by calling the Secondary School Liaison Office at 675-3111 ext. 4014.

Counsellors are invited to call 675-3111 ext. 4301 for any information about the College or our programs.

Academic Calendar

Important Dates

1984	September 4	first day of classes
	October 8	Thanksgiving
	December 4	fees due for winter semester
	December 18	fall semester ends
1985	January 7	first day of classes
	January 14	interviewing period begins
	January 21	last day to obtain refund for winter semester
	February 15	submission of applications for fall 1985 admission
	March 4 to March 8	reading week
	March 22	last day to withdraw from a course
	April 1	notification of acceptance begins
	April 5	Good Friday
	May 2	last day of classes
	July 15	new students' fees due
	August 2	continuing students' fees due
	September 2	Labour day
	September 3	first day of classes
	September 17	last day to obtain refund for fall semester
	October 14	Thanksgiving
	November 8	last day to withdraw for a course
	December 2	fees due for winter semester
	December 17	fall semester ends
1986	January 6	first day of classes
	January 20	last day to obtain refund for winter semester
	March 3 to March 7	reading week
	March 28	Good Friday
	May 2	last day of classes

Fees and Financial Assistance

The basic tuition fee for full-time post-secondary diploma and certificate programs is $272.50 per semester. There is a student activity fee of $31.50 per semester. You will also be required to pay for textbooks, instruments and other supplies needed for your program. The cost of supplies can vary from $50 to $400 per semester.

The fee for applicants from foreign countries who plan to attend Humber College on a student visa is $4,598.00 per academic year. There is a non-refundable deposit of $200.00.

For short programs, students must pay $15.20 a week for tuition and $0.25 to $0.50 a day for learning-material rental.

Fees can be paid by cash, certified cheque or charge card (Visa or Master Card). Cheques and money orders should be made out to Humber College. There is a surcharge for late payment of fees.

The transfer of full-time fees to another term will be considered on an individual basis. The transfer of fees to another college of applied arts and technology (CAAT) may be allowed under special circumstances.

Refund Policy

If you would like to withdraw from your program, you can do so at anytime. However, to receive a refund the College must be notified in writing within ten working days of your first scheduled class.

Your refund will not include your confirmation fee. Please allow four weeks for the refund cheque to be processed.

You will receive detailed information on fees and refunds with your letter of acceptance.

Equipment Deposit

Some programs at Humber involve the use of very expensive technical equipment. In these cases students may use the College's equipment by leaving a deposit at the beginning of the school year. If loss or damage occurs, the cost will be deducted from the deposit. Otherwise, the deposit will be returned at the end of the year.

Ontario Student Assistance Program

The Ontario Student Assistance Program, or O.S.A.P., has a number of plans to help you meet the cost of full-time post-secondary study. The amount of funds that may be granted does not cover the full cost of coming to College. Each application is assessed on the basis of resources, real or expected, available to the student. The amount granted will vary depending upon the resources available as determined by the O.S.A.P. assessment, and allowable costs for each program.

Canada Student Loans Plan

This program provides subsidized loan assistance to students who are registered in an approved certificate or diploma program which lasts at least 12 weeks. You qualify for a Canada Student Loan if you are taking at least 60 percent of a full course load as defined by Humber College.

Scholarships and Bursaries

Scholarships and bursaries, donated by corporations, community organizations and individuals, are also available. Scholarships are awarded according to the donor's specifications to students who achieve academic excellence. Bursaries are awarded on the basis of need but marks are taken into consideration.

Humber does not offer any entrance bursaries or scholarships.

For more information on financial assistance call the Financial Aids office at 675-5001.

Student Services

Athletics

While at Humber you are welcome to take advantage of our excellent athletic facilities. We have squash courts, gymnasiums, a weight training room, saunas, a jogging area and more.

If you prefer team sports, there is a variety of varsity and intramural activities which range from basketball and soccer to ice hockey. Or, if you just want to get in shape, we have regular fitness classes during the day and in the evenings. Come as often as you like, but remember to bring your student card.

For more information call the North Campus Athletic Department at 675-5097.

Counselling Services

Deciding on the program which is right for you is not always an easy task. Neither is choosing an alternate program if you can't have your first choice. Our counsellors will help you find information and make decisions even before you start school.

Once you are a student at Humber it may happen that you question whether the program you are in is best for you. Or, you may feel that you could learn more if you had better study habits. Our counsellors can help you with these problems as well.

Our resources include a computerized career search system called CHOICES. We also have audio and video tapes on study skills and self-management. These tapes can help you to build confidence and reduce tension. A Peer Tutoring Program pairs weaker students with stronger ones in various subject areas.

At school, at work, or at play every extra skill can help you achieve your goals. Drop in and make an appointment with the Counselling office on your campus.
North Room C133, 675-5090
Lakeshore Room A169, 252-5571
Queensway Room 6C, 252-9441 ext. 317
Keelesdale Room 7, 763-5141 ext. 45

Day Care Facilities

North Campus students with children are welcome to use either the Day Care Centre, the Children's Activity Centre or the Child Development Centre. The Day Care Centre is for children between the ages of two years and five years and is designed for full-time care. Applications for the Day Care Centre should be submitted as early as possible because there is a waiting list. The Children's Activity Centre cares for children between the ages of 16 months to seven years on a part-time basis (up to 24 hours a week). The Child Development Centre offers full-time care for infants up to five years of age as well as children with special needs.

For more information call 675-3111, Day Care Centre ext. 4497 or Activity Centre ext. 4430. You can call the Child Development Centre at 675-5057.

Food Services

You will find several eating spots at the North Campus to satisfy any appetite. The Pipe is a large cafeteria that serves hot meals all day. The Humberger is a smaller cafeteria where you can get soup, sandwiches and light meals as late as 9 p.m. There is also the Salad Bar which is open at lunch time.

The other campuses also have cafeterias where you can buy either a hot meal or a snack during class hours. The York-Eglinton Centre is supplied with vending machines for soft drinks and snacks.

Caps, a pub and deli located at the North Campus, is open to all Humber College students from Monday to Friday. Entertainment is scheduled regularly.

Development Centres (Human Studies)

Humber has two facilities to help students who are weak in the basic skills of English and math. One, the Language Development Centre, provides assistance to students needing extra help in English. They may drop in anytime for specific help on a problem, or they may come on a regular basis to work on a program we will design to meet their individual needs. In the other, the Math Development Centre, Fundamental Math courses are offered for students whose pretests have shown their skills need improvement. There is also some individualized help offered on a drop-in basis.

The Math Development Centre is in E345, and the Language Development Centre, in E344, at North and B202 at Lakeshore. We're open from 9-4:15 Monday to Thursday and from 9-3:20 on Friday.

Handicapped Students Facilities

Ramps make access to all campuses of the College possible to students using wheelchairs. In the North Campus there is also an elevator for which you can obtain a key with a $5.00 deposit.

All campuses are equipped to provide basic services to handicapped students (phones, washrooms, etc.).

Housing

Humber College provides a listing service to students who are in search of an apartment or room. The listings include several kinds of accommodations: room and board, apartments, flats, townhouses, etc. Because of the demand, we urge you to begin looking for housing towards the end of June.

We have a residence for women located at the Osler Campus. Bus transportation is provided between the North Campus and the residence.

For information on housing, phone 675-3111 ext. 4531 or 4535.

Libraries and Bookstores

The library at your campus is well stocked with magazines, newspapers and other resource materials to help you with essays and reports or simply for your enjoyment.

The Learning Resources Centre at the North campus and the Instructional Materials Centre at the Lakeshore and Queensway campuses can provide you with the audio-visual equipment and materials that will add professionalism to your presentations.

The North, Lakeshore, Queensway and Keelesdale campuses all have bookstores where you can purchase textbooks, supplies, candy and tobacco. There is a post office located in the North campus bookstore.

Placement Services

Finding a job takes hard work and determination. Although no one can find a job for you, we can help. Throughout the year the Placement Office posts hundreds of summer, part-time and career-oriented jobs.

When you come to the Placement Office, the staff can give you tips on job search and interview techniques and writing effective letters and resumes. The College also provides on-campus interviewing facilities.

Each campus has a Placement Office. For information on job opportunities or services available call or drop by the office serving your campus.

North 675-5028
Lakeshore 252-5571
Queensway 252-9441
Keelesdale 763-5141

Peer Tutoring

As a service to the students who are having difficulties in some courses, the Counselling department has set up a system of peer tutoring. A successful student volunteers assistance in a specific course to a student who needs additional help on a personal basis.

Special Needs Learning Materials

Humber College has a new service to provide Special Needs Learning Materials. Students requiring textbooks transcribed onto tape, or BRAILLE may contact the Humber College Library.

Services en Francais

Le Collège Humber offre des cours, des programmes et des services en français à la population étudiante.

Les cours sont la responsabilité de la Division des Humanités (Human Studies Division) et de l'Education Permanente (Continuing Education).

Les programmes sont donnés au Campus Lakeshore et des services en français sont pourvus à ce campus et au North Campus.

Pour des renseignements en français, composer le 675-5006.

Transportation

All Humber College campuses can be reached by public transportation. For more details see the map in the back.

In addition, Humber has its own buses for inter-campus travel. The distinctive black and white buses travel to the North, Lakeshore and Osler campuses from the Islington Subway station and the Osler campus residence. You can get on a Humber bus at various points along one of the two routes.

Schedules, passes and tickets are all available at your student association at North and Lakeshore campuses or at Osler Campus.

If you drive, there is parking at all campuses except Osler and York-Eglinton. You will have to buy a parking sticker at the Bookstore or pay by the day.

E

Academic Upgrading

Locations: Lakeshore or Keelesdale Campus
Start dates: Evening classes begin every semester.

If you never completed high school, and are 19 years of age or over, it may be appropriate for you to begin your college education in our Academic Upgrading Program. To start the program you should have an interview with an admissions officer to help determine a career path that's best for you. We can help you work toward a certificate or toward admission into any program outlined in this calendar.

For every program, we have determined the specific academic tasks that you should be able to do by the time you are admitted. This allows us to build an individual study plan for you that may include English, mathematics, physics, chemistry, typing, drafting and life skills. To ensure proper placement, the first days of the program are devoted to orientation and evaluation. You may be eligible for assistance through your local Canadian Employment and Immigration Centre (Manpower), or through one of the financial assistance programs sponsored by the Province of Ontario.

F

Languages

French Programming — Cours en francais

Committed to meeting the needs of an ever-growing population of French-speaking students, Humber offers many courses in French. In this way graduates of highschool immersion programs can maintain and improve their level of proficiency in the French language.

Plus vous serez nombreux, plus nous pourrons vous offrir de cours en français Communiquez avec Raymond Doucet pour plus de détails 675-5006.

Nous offrons déjà un programme: la Bureautique.

English As A Second Language (E.S.L.)

Full Time Day Classes

Basic E.S.L.

This is a 24-week beginners course which emphasizes the oral skills needed for employment and further education in Canada. Classes start at intervals throughout the year and are held at Keelesdale and York-Eglinton campuses.

Advanced E.S.L.

This 12-week program helps students improve both oral and writing skills as they prepare to enter college or university courses or to work in their professions. Admission is by interview and tests (by appointment only). Classes are held at Keelesdale campus.

NOTE:
For information, please call 763-5141, ext. 57.

Students may be eligible for assistance through their local Canadian Employment and Immigration Centre.

How to get the most out of this calendar

You will notice that there are five basic divisions where we have tried to group together related programs. These divisions are Applied & Creative Arts, Business, Health Sciences and Human Services, Hospitality and Technology. Each program has one reference number no matter how many options it includes.

Short programs are placed at the end of each division. These usually have a duration of less than a year and are often sponsored by the Canada Employment and Immigration Centre.

If you do not find the program you are looking for in the table of contents in front of each division, look up the index in the back of the book where all our programs are listed alphabetically. The programs are often under two different names. For example, retail floriculture is also listed under flower shop management. An asterisk in front of a program means that Humber is the only college to offer this program in Ontario.

To read the course descriptions for programs that interest you, just go to the back of the book where the course descriptions are divided in the same way as the program divisions. The thumb index matches the two sections for easier reference. You look up the course as you would in a dictionary.

With more than 1,000 courses included in this book, it is possible that some course descriptions have been omitted.

Applied and Creative Arts 100

Contents

Equestrian Coach Preparatory Program

North Campus

Two semesters beginning September

This intensive program will prepare you and your horse to meet the requirements for your certification as a qualified level 1 or 2 instructor under the Canadian Coaching Development System.

The ultimate objective of this system is to produce Canadian coaches capable of fielding horses and riders of international calibre in the three Olympic disciplines (Grand Prix Jumping, Three-Day Eventing and Dressage). This pinnacle must be supported by a firm base of instruction at all levels of riding from the beginner up. Hence, the establishment of a six-level program designed to encourage qualified instructor certification at all levels.

Assistant Level 1, General (non-riding): to assist only

Level 1, General: capable of teaching beginner riders

Level 2, General: capable of teaching intermediate riders

Level 3, Specialist: (provincial) in Olympic disciplines

Level 4, Specialist: (national) in Olympic disciplines

Level 5, Specialist: (international) in Olympic disciplines

At the end of this program, students will take either the level 1 or level 2 exam administered by the Ontario Equestrian Federation. Please note that completion of the Humber course is only the preparatory stage and that successful completion of the exam is necessary for certification.

Admission Requirements

- Ontario Secondary Shool Graduation Diploma or equivalent
- applicants must be capable of: working a horse effectively on the flat at walk, trot and canter, negotiating a course of three-foot fences
- provide a horse capable of meeting the objectives outlined in the C.A.C. Equestrian Level 1 Manual.
- personal interview (for applicants living over 300 miles from the College, resumes plus pictures of themselves riding on the flat and over fences will be considered as a substitute

Job Opportunities

Full-time and part-time teaching positions in private and public stables, competition coaching and training (beginner and intermediate level), freelance teaching, and pony club instruction are all areas of possible involvement for the certified level 1 or level 2 equestrian coach. There are a considerable number of part-time jobs available in the industry, but a limited number of full-time positions.

Those employed in a coaching career will find the hours irregular, often teaching from late afternoon on into the evening, and all day on weekends. Instructors in this field are paid either a base salary with fringe benefits if working for one stable or by the hour if freelancing. At the bottom end of the scale, i.e. the level 1 coach, a low salary scale should be anticipated. However, salaries can be expected to escalate if the coach advances to a higher certification level.

Additional Costs

- Textbooks will cost approximately $60 but you should count on $160 for personal riding equipment and apparel and $130 a month for the horse's board. Students will be expected to supply all the necessary tack, grooming equipment and bandages for their horses, together with suitable riding clothes for themselves. Stable utensils, clippers and lunging equipment will be available from the College.
- In order to take the coaching exams, you must be a Senior Member of the Canadian Equestrian Federation. This will cost those who do not have this status approximately $45.
- The cost of the required Technical Clinic is $50 and the cost of the Examination is $100. These costs are made payable to the Canadian Equestrian Federation before you take the Coaching Association of Canada exams.

Curriculum

Semester 1	(26 hours/week)	Credits
	Theory of Coaching 1	1
	Equestrian Skills 1*	6
	Horse Health 1	2
	Instructional Theory*	2
	Practice Teaching*	2
	Stable Management*	3
	Practicum 1	4
	Basic Nutrition	2
	Communications 1	4
Semester 2	**(26 hours/week)**	
	Theory of Coaching 2	1
	Equestrian Skills 2*	6
	Horse Health 2	2
	Practicum 2*	4
	Small Business and Farm Management	5
	Breaking, Training and Conditioning	3
	First Aid and Accident Prevention*	1
	Communications 2	4

*These courses are crucial to your success.

It is a prerequisite of the Coaching Certificate Program that applicants for the level 1 exam are at least 18 years of age and have some teaching experience. Applicants for the level 2 exam must be at least 20 years of age and have a minimum of two years teaching experience. Students are totally responsible for their horse's care and must find someone to look after their horse when they are absent. We strongly encourage you to plan for transportation for you and your horse to take advantage of the numerous schooling shows in the area. These shows give the added experience required for the level 1 and 2 exams. While preparing for the Ontario Equestrian Federation's final exam, students will be immersed in review and assimilation of all course material covered during the year.

North Campus

Four Semesters Beginning September plus four weeks of Field Practice in May

Have you ever thought of preparing for a career with horses? If so, you might seriously consider our new, revised, Equine Studies program. The program is designed to offer you a number of options within the horse industry. Our one-year certificate program will prepare you to obtain employment as a skilled stable attendant. You will learn the rudiments of nutrition and horse health. In Practical Horse Care you will learn and perfect the necessary skills such as bandaging, braiding and clipping. Facility Operations will teach you how to drive a tractor, harrow an arena and make simple stable repairs. During May, prior to graduation, you will be placed in the work force in order to gain additional skills and experience.

The second year of our program is highly specialized. Successful graduates of our certificate program and qualified candidates presently working in the industry may be admitted to either our Equestrian Coaching Diploma or Equine Management Diploma programs.

The intensive Equine Management Option is designed to build on to your previous knowledge and to prepare you for an entry-level position in the management of show, breeding, western or racing stables.

The Equestrian Coaching Option will prepare you to meet the requirements for certification as a qualified Level 1 or Level 2 instructor under the Canadian Coaching Development System.

Curriculum

Horse Care and Equine Skills Program – Certificate

Semester 1	(24 hours/week)	Credits
	Basic Nutrition	2
	Horse Industry 1	2
	Horse Health 1	2
	Riding & Driving Skills 1	3
	Practical Horse Care 1	3
	Facility Operations 1	4
	Communications 1	4
	General Studies	3
	First Aid & Accident Prev.	1
Semester 2	**(23 hours/week)**	
	Horse Industry 2	2
	Horse Health 2	2
	Riding & Driving Skills 2	3
	Practical Horse Care 2	2
	Facility Operations 2	4
	Breaking & Training	3
	Communications 2	4
	General Studies	3

Admission Requirements

- Ontario Secondary School Graduation Diploma
- interest in and suitability for employment in the horse industry
- a certificate confirming satisfactory physical health
- experience in some phase of the equine industry
- a resume must be submitted with original application
- this resume should list all equine related work experience, future goals (short and long-term), reasons for applying to this program as well as two photographs (English – one on the flat, one over fences; Western – one of equitation, one of performance) if applicable. Please note: unfortunately we are unable to return the photographs.
- a confirmation appointment may be necessary prior to final acceptance

Interests and Skills

- Self discipline, a sense of responsibility, and maturity.
- Ability to work as part of a team.
- Willingness to work hard and pride in accomplishment.
- Communications skills.

Job Opportunities

Certificate Program

Jobs exist as skilled labour in breeding farms, show stables, racing stables and boarding and training operations. Employment in Equine Care usually means a 5-6 day work week. The work is physically demanding and much of the work is done outdoors. Fringe benefits may include room and/or board, board for a horse, the opportunity to travel and opportunity for further education. One should anticipate a low salary.

Management

Racing operations, breeding farms, show stables, racetrack administration, Western establishments and boarding and training operations and horse related businesses are all areas of possible employment as a junior manager.

Coaching

Full-time and part-time teaching positions in private and public stables, competition coaching and training (beginner and intermediate level), freelance teaching, and pony club instruction are all areas of possible involvement for the certified level 1 or level 2 equestrian coach. There are a considerable number of part-time jobs available in the industry, but a limited number of full-time positions.

Additional Costs

- Personal riding, working and grooming equipment can total $250.00. Student's work in the field for various periods during their two years in the program and are expected to pay for their meals and transportation during field practice periods. On the average, costs will not exceed the day-to-day costs of meals and travel to the College.

Diploma in Equine Management

Prerequisite: Horse Care and Equine Skills Program OR equivalent life experience

Semester 3	(24 hours/week)	Credits
	Anatomy & Physiology 1	2
	Nutrition 1	2
	T.B. Racing Industry OR	2
	Showing & Judging 1	2
	Stable & Farm Mgmt. 1	2
	Reproduction & Breeding 1	2
	Riding Skills 1	3
	Facility Mgmt. 1	4
	Elements of Accounting	4
	General Studies	3
Semester 4	**(24 hours/week)**	
	Anatomy & Physiology 2	2
	Nutrition 2	2
	Racetrack Administration OR	2
	Showing & Judging 2	2
	Reproduction & Breeding 2	2
	Riding Skills 2	3
	Equine Exercise Physiology	2
	Facility Mgmt. 2	4
	Stable & Farm Mgmt. 2	2
	Basic Keyboarding	2
	General Studies	3

Diploma in Equestrian Coaching

(to take place of the Equestrian Coach Preparatory Program) Pre-requisite: Horse Care and Equine Skills Program OR equivalent life experience

Semester 3	(24 hours/week)	Credits
	Anatomy & Physiology 1	2
	Nutrition 1	2
	Equestrian Sports Psych.	2
	Instructional Theory	2
	Showing & Judging 1	2
	Stable & Farm Mgmt. 1	2
	Theory of Coaching 1	1
	Teaching Skills 1	2
	Equestrian Skills 1	5
	Coaching Aware. Theory 1	1
	General Studies	3
Semester 4	**(24 hours/week)**	
	Anatomy & Physiology 2	2
	Nutrition 2	2
	Coaching Aware. Theory 2	1
	Showing & Judging 2	2
	Stable & Farm Mgmt. 2	2
	Teaching Skills 2	4
	Theory of Coaching 2	1
	Equestrian Skills 2	5
	Equine Physiology Exer.	2
	General Studies	3

Fashion Modelling and Related Careers

North Campus

Two semesters beginning September

Success in fashion modelling and in related careers requires more than training in skills and techniques to be used on the job. It also depends on the development of a professional attitude to personal appearance, to industry expectations and the acceptance of trends in the wholesale or retail fashion as well as in the beauty industry.

The first semester of the program is the same, whether you choose fashion modelling or a related career. It is during this period that you should develop an awareness of your specific interests and talents because you will have to make a choice for the second semester's option.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- excellent communication skills and outgoing personality
- a basic understanding of the fashion modelling profession is an asset for your success in this program.
- for aspiring models, clear skin, white even teeth, photogenic face and a well-proportioned slender body (between 5'6 and 5'10 are minimum requirements.
- orientation session at which you should bring a snapshot of yourself (preferably head and shoulders). Telephone orientation is possible for students who live far outside of the metro Toronto area.

Curriculum

		Credits
Semester 1	(24 hours/week)	
	General Fashion Show Production 1	4
	General Fashion Industry 1	4
	General Fashion Show Techniques 1	4
	General Field Work Orientation 1	4
	Cosmetic Theory & Practice 1	4
	Communications 1	4
Semester 2	(24 hours/week)	
	Modelling Careers:	
	Cosmetic & Beauty Industry	4
	Fashion Modelling Industry 2	4
	Fashion Show Techniques 2	4
	Field Work Orientation 2	4
	Fashion Photography Modelling	4
	Communications 2	4
	Related Careers:	
	Fashion Show Production 2	4
	Fashion Industry Careers	4
	Fashion Stylist Photography	4
	Cosmetic Theory & Practice 2	4
	Field Work Orientation 2	4
	Communications 2	4

Job Opportunities

Armed with a carefully prepared portfolio assembled in the second semester, graduates will look for jobs as fashion models in top modelling agencies or wholesale agencies where sales positions are also available, as fashion photography studio assistants, as cosmetics representatives or demonstrators, as make-up artists, beauty spa or modelling agency staff, and as cosmetics boutique attendants or, later, managers.

Field trips include fashion shows, cosmetic outlets, wholesale garment areas, fashion centres within Metropolitan Toronto, and photography studios. During the year many guest lecturers from the fashion industry offer seminars to students.

Food Industry Technician Program

North Campus

Five semesters beginning September

This program prepares students for jobs in the food industry which develops marketable forms of food. The emphasis is on the experimental approach to food, a knowledge of its components, ingredients and nutrients, as well as sensory evaluation, product development and food marketing.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- Grade 11 or 12 chemistry is highly recommended

Interests and Skills

- ability to make decisions and assume responsibility
- capacity to relate one subject to another and put theory into practice
- ability to work well with people

Job Opportunities

The employment rate of this program's graduates is good. The food industry provides jobs in quality control, product development, product surveys and marketing promotion. Work and projects in product testing laboratories are organized through a team approach. With experience graduates can improve their position through responsible application to their job and continued interest in courses recommended by their employers.

Curriculum

Semester 1	(24 hours/week)	Credits
	Foods 1	4
	Nutrition 1	3
	Consumer Research 1	4
	Science of Foods	3
	Mathematics for Food Technicians	3
	Communications 1	4
	General Studies	3
Semester 2	**(24 hours/week)**	
	Foods 2	4
	Nutrition 2	3
	Consumer Research 2	4
	Field Practice 1	2
	Food Chemistry 1	4
	Communications 2	4
	General Studies	3
Semester 3	**(24 hours/week)**	
	Experimental Foods	4
	Foods 3	4
	Food Marketing 1	4
	Supervisory Techniques 1	4
	Field Practice 2	2
	Food Chemistry 2	3
	General Studies	3
Semester 4	**(23 hours/week)**	
	Field Practice 3	6
	Food 4	4
	Food Marketing 2	4
	Supervisory Techniques 2	3
	Microbiology	3
	General Studies	3
Semester 5		
	Internship 8 weeks (two 4-week field placement)	6

Landscape Technician/ Technologist Program

North Campus

Four semesters for technician training plus two more for technologist training

This program will provide you with a thorough knowledge of landscape development, site engineering, design layouts, general horticulture and related technology. In-class studies during the academic year, combined with summer work experience and a fifth semester during the summer, give you the opportunity to understand basic horticultural principles and common trade procedures. Business courses are included with landscape courses to provide you with an insight into progressive business practices.

Once you have completed your first year, you will choose either the Landscape Option, the Arboriculture Option, or the Interior Plantscape Option.

The third year, aimed at the Technologist focuses on training in construction practices, turf management, plant identification and pathology during a summer semester (July and August). The sixth semester completes your training during the winter preparing you for employment in the landscape industry for mid-April.

Admission Requirements

- Ontario Secondary School Graduation Diploma or equivalent

Job Opportunities

With this diploma and some experience you will be able to assume positions of responsibility with landscape contractors, in nurseries, garden centres, park systems, golf courses and horticultural product companies. After a few years you may wish to form your own landscape company or become manager for a large contracting company, superintendent of a golf course, sales manager for a horticultural supply company, etc.

Curriculum

		Credits
Semester 1	**(23 hours/week)**	
	Site Layout & Survey Math 1	3
	Landscape Drawing 1	3
	Pest Control	3
	Arboriculture 1	2
	Applied Botany	3
	Plant Identification 1	2
	Communications 1	4
	General Studies	3
Semester 2	**(23 hours/week)**	
	Computer Studies	4
	Landscape Design 1	3
	Applied Soils	3
	Arboriculture 2	2
	Garden Centre Operation	2
	Plant Identification 2	2
	Communications 2	4
	General Studies	3
Semester 3	**(22 hours/week)**	
	Site Construction Math 1	4
	Landscape Materials & Techniques	3
	Field Instruction 1	4
	(Interior Plantscape Option, Arboriculture Option or Landscape Option) Floriculture 1	3
	Arboriculture 3	3
	General Studies	3
	Plant Identification	2
Semester 4	**(25 hours/week)**	
	Site Construction math 2	4
	Field Instruction 2	4
	(Interior Plantscape Option, Arboriculture Option or Landscape Option) Floriculture 2	3
	Arboriculture 4	3
	Elements of Accounting	4
	General Studies	3
	Landscape Design 2	2
	Plant Identification	2

Semester 5	(29 hours/week) (July-August)	Credits
	Landscape Design & Presentation 1	3
	Construction Practices 1	8
	Plant identification 3	2
	Applied Plant Pathology	3
	Turf Management	3
	Municipal Parks Operations	2
Semester 6	**(27 hours/week)**	
	Landscape Design & Presentation 2	3
	Construction Practices 2	6
	Plant Identification 4	2
	Sales, Marketing & Advertising	4
	Insurance and Risks	3
	First Aid and Accident Prevention	1
	Construction Management	4
	Supervision & Management	4

Law and Security Administration

Lakeshore Campus

Four semesters beginning September

This two-year program will prepare you for a career in law enforcement or a related field. Your courses will cover police, security, customs, corrections and private investigation functions. As well you will study the administration of justice in Canada, law enforcement concepts and practices, and the human dimensions involved in this type of work.

Curriculum

Semester 1	(23 hours/week)	Credits
	Nature of Crime 1	4
	Introduction to Law	4
	Human Resources Development 1	3
	Philosophy of Law Enforcement 1	4
	Police Physical Fitness 1	1
	Communications	4
	General Studies	3

Admission Requirements

- Ontario Secondary School Graduation Diploma
- medical certificate to prove your good health and a colour blindness test
- orientation seminar which will help you understand the employment reality, discuss career opportunities, outline the personal characteristics of a successful candidate and explain the philosophy of the program.

Interests and Skills

- several law enforcement agencies require specific height, weight and vision standards, good mental and physical health, good moral character and habits, and Canadian or British citizenship

Job Opportunities

Entry-level jobs are security officers, court security, police dispatchers, police station duty operators and correctional officers. After a couple of years, you can aspire to become police constable, security supervisor or custom officer depending on your abilities.

Semester 2	(24 hours/week)	Credits
	Criminal Legislation 1	4
	Nature of Crime 2	4
	Security Practices	4
	Criminalistics 1	4
	Police Physical Fitness 2	1
	Communications 2	4
	General Studies	3
Semester 3	**(26 hours/week)**	
	Politics & Power Structures	3
	Criminalistics 2	4
	Criminal Legislation	4
	Field Practice 1	4
	Philosophy of Law Enforcement 2	4
	Racial and Ethnic Group Relations	3
	Police Physical Fitness 3	1
	General Studies	3
Semester 4	**(24 hours/week)**	
	Crisis Intervention	3
	Field Practice 2	4
	Criminology and Corrections	3
	Customs and Immigration Procedures	2
	Criminal Justice Administration	2
	First Aid	2
	Applied Psychology	4
	Police Physical Fitness 4	1
	General Studies	3

During the second year you will spend at least 100 hours in field placement and will go on an extended field trip.

Nature Interpreters Program

North Campus

Post-Graduate Program

3 semesters beginning January
(one in field placement May to August)

(Pending approval of the Ministry of Colleges and Universities)

In this program you will learn the techniques and skills needed to provide interpretive programs with variety and expertise. Major emphasis is placed on communicating effectively with the public by understanding and anticipating the needs of a variety of groups.

During the first semester a solid foundation of interpretive skills will be laid to assist the students in the middle placement semester. The planning of programs, displays, posters and pamphlets will lead students through actual examples from beginning to end, with a chance to apply this in the second and third semesters. Further emphasis is placed on knowing available resources. Many interpretive or natural resource centres will be visited, and available resource literature and courses will be reviewed.

If you are considering this program, you should have a strong background in natural science and an understanding for the role a nature interpreter plays. Also valuable is an understanding for the jobs available and a keen desire to strive professionally for a position in a competitive field.

Courses of study include: Life Span Development, Social Interaction in Interpretation, and Interpretive Planning. The second semester is field placement. The third semester will include courses in Applied Interpretation, Nature Interpretation Resources 2, First Aid and CPR, and Media Applications.

Admission Requirements

- graduate of a complementary college program; i.e. Recreation Leadership, Horticulture, Fish and Wildlife Management;
- OR completion of several relevant Natural Science courses;
- OR a strong work experience background dealing with resource management or a natural science area;
- OR an Ontario Secondary School Graduation diploma (including Biology), plus a strong hobby naturalist background.
- an interview to determine suitability.

Job Opportunities

Possible areas for employment include conservation authorities, school board outdoor education centres, provincial parks, arboreta, etc.

Additional Costs

- Textbooks and other supplies will cost approximately $125. Field trips will incur additional expenses and relocation expenses may be involved in the second semester.
- For more information contact Donna Reid at 675-5009.

Field Placement

- A four-month field placement takes place during May to August. Students are expected to find an experience-related summer job. A resource of agencies for placement is available for those students experiencing difficulty. However, a paying position may be compromised.

Audio-Visual Technician

North Campus

Four semesters beginning September

The rapid increase in the use of all communication media for educating, marketing, and training has created a demand for knowledgeable individuals skilled in the use, creation, presentation, and distribution of audio-visual packages. Students work with computers, still photography, television, multi-image slide sound productions, scripting, lighting, graphics, and electronics. Humber's challenging and practical Audio-Visual Technician Program offers two options: production and technical, both supported by active involvement in the AV industry.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- grade 12 technical or academic mathematics, at least 3 credits in science (up to grade 12)
- physics would be very helpful
- pre-admission orientation meeting

Job Opportunities

Audio-visual graduates will find work in industry, many marketing and sales organizations, government ministries and service commissions, educational institutions, libraries, hospitals, media production corporations and closed-circuit television facilities.

Depending on the services offered and the degree of task specialization, most of these employers would require a Humber College Audio-Visual Technician graduate with either strong production capabilities or thorough audio-visual technical skills.

In order to prepare for these demands, students will have obtained on-the-job training during their internship field work in the last semester.

Curriculum

Technical Option

		Credits
Semester 1	**(24 hours/week)**	
	A.V. Media Applic. Intro.	3
	Computer Basic, Intro.	3
	Communications 1	4
	AV Mathematics	2
	Photography 1	3
	Electronic Keyboarding	2
	AV Electronics 1	3
	TV Production, Intro.	4
Semester 2	**(28 hours/week)**	
	Comm. Cont. A.V. Equip.	2
	Communications 2	4
	Photography 2	3
	Computer Design	3
	TV Production 2	4
	AV Electronics 2	3
	AV Applied Physics	2
	Audio Recording Techniques	1
	General Studies (2)	6
Semester 3	**(22 hours/week)**	
	AV Prod. Workshop, Sponsored Projects	2
	Computer Animation/Videotext	3
	TV Production 3	4
	AV Electronics 3	3
	Graphic Applications for Media	4
	General Studies (2)	6

(All program courses are prerequisite for Work Experience Fieldwork)

Semester 4	**(24 hours/week)**	
	Work Experience Field Work	24

Production Option

Semester 1	(24 hours/week)	Credits
	A.V. Media Applic., Intro.	3
	Computer Basic, Intro.	3
	Communications 1	4
	A.V. Mathematics	2
	Photography 1	3
	Electronic Keyboarding	2
	Scripting 1	3
	TV Production, Intro.	4
Semester 2	**(27 hours/week)**	
	Computer Cont. A.V. Equip.	2
	Communications 2	4
	Photography 2	3
	Computer Design	3
	TV Production 2	4
	Scripting 2, Workshop	2
	Audio Recording Techniques	1
	AV Applied Physics	2
	General Studies (2)	6
Semester 3	**(22 hours/week)**	
	AV Prod. Workshop, Sponsored Projects	2
	Computer Animation/Videotext	3
	TV Production 3	4
	Lighting Applications	3
	Graphic Applications for Media	4
	General Studies (2)	6

(All program courses are prerequisite for Work Experience Fieldwork)

Semester 4	(24 hours/week)	
	Work Experience Field Work	24

Creative Photography

North Campus

Four semesters beginning September

A picture is worth 10,000 words, and today's society is one in which photographs are a major communication tool. If you wish to combine artistic skills with a business sense, photography could be the career for you. The two-year program offers you photographic technology, creative techniques, support skills and practical applied photography training.

You will study lighting, studio and darkroom techniques, theory for black and white and colour photography. The objective of the program is to train you in the many dimensions of the profession: portraiture, wedding, fashion, architectural, nature, industrial and medical photography.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- pre-admission interview, at which time a portfolio of black-and-white, colour slide or print photography must be presented
- completion of a basic photography course is a distinct advantage
- the recommended academic preparation is grade 12 English, grade 11 math, grade 11 or 12 physics or chemistry
- Students are expected to attend all guest lectures.

Job Opportunities

Basically, graduates work in studios, occasionally in corporations and institutions, and in the industry, or they can become freelance professionals, particularly after a few years of experience.

Additional Costs

- First-year students are expected to buy cameras, tripods, meters, tanks, auxiliary equipment and film (which will cost approximately $3,000). Second year students will have to purchase supplies and equipment that may also cost up to $3,000.

Curriculum

		Credits
Semester 1	**(21 hours/week)**	
	Photography Theory 1	2
	Photography Studio 1	3
	Photography Applied 1	3
	Photography Darkroom Techniques 1	3
	Photography Lighting 1	3
	Elements of Photographic Design 1	2
	Communication 1	4
	General Studies	3
Semester 2	**(22 hours/week)**	
	Photography Theory 2	2
	Photography Studio 2	3
	Photography Applied 2	4
	Photography Darkroom Techniques 2	3
	Photography Lighting 2	3
	Elements of Photographic Design 2	2
	Communications 2	4
	General Studies	3
Semester 3	**(24 hours/week)**	
	Photography Theory 3	2
	Photography Studio 3	3
	Photography Applied 3	4
	Photography Darkroom Techniques 3	3
	Photography Colour Process	4
	Photography Graphics	2
	Photography A/V Techniques	3
	General Studies	3
Semester 4	**(19 hours/week)**	
	Photography Business Management	2
	Photography Theory 4	2
	Photography Studio 4	2
	Photography Lighting 3	3
	Photography Applied 4	4
	Photography Professional Studies	3
	General Studies	3

Film and Television Production

North Campus

Six semesters beginning September

This skills-oriented program is designed to provide the knowledge and expertise required to undertake many of the technical functions of the two popular media of film and television. Professional production facilities are available for students to apply their artistic and technical abilities to the preparation of film and video-tape for use in cinema and broadcasting. Classroom lectures and hands-on practical experience equip students to become camera operators, directors, writers, editors, lighting technicians, and production managers. During the third year, students devote most of their time to film and tape production. Our students productions have won acclaim in competition and at festivals.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- pre-admission interview, at which time a portfolio of creative work related to film and television production must be presented

Job Opportunities

The fields of film and television are highly competitive, and entry positions in the industry are usually junior. Graduates work in the public and private sectors of television, cable systems, film production houses, audio-visual firms or, with experience, as freelance producers to the industry-at-large.

Additional Costs

- $600 the first year, $1,000 the second and $1,500 in the third.

Curriculum

Semester 1	(26 hours/week)	Credits
	Documentary Film Styles 1	2
	Script Writing 1	2
	Direction 1	2
	Super 8 Prod. Workshop	4
	Intro to T.V. Production	3
	Still Photography	3
	Communications 1	4
	General Studies (2)	6
Semester 2	**(26 hours/week)**	
	Film & T.V. Program Formats 1	2
	Script Writing 2	2
	Direction 2	2
	Super 8 Production Workshop 2	4
	Intermediate T.V. Production 2	3
	Still Photography 3	3
	Communications 2	4
	General Studies (2)	6
(Semester 3–26 hours/week & Semester 4–27 hours/week)		
	Production Management 1 & 2	2 + 2
	Script Writing 3 & 4	2 + 2
	Film/TV Directing 1 & 2	2 + 2
	16mm Cinematography 1 & 2	2 + 2
	Still Photography 3 & 4	3 + 3
	Sound Recording 1 & 2	2 + 2
	Post Production 1 & 2	2 + 2
	Graphics & Animation 1 & 2	2 + 2
	Colour T.V. Production 1 & 2	3 + 3
	Film Prod. Workshop	2 + 2
	E.F.P. (TV) Workshop	2 + 2
	Sound Recording/Post. Prod. Workshop	2 + 2

*Third-year students may select a minimum of two courses out of the seven subjects listed in semesters five and six. The student may select more courses if Program Faculty feel the student is able to do justice to the extra workload. Each third-year student will be expected to put in at least an additional six hours of individual learning. A student who is willing to work hard and do extra work has the opportunity to prepare well for a rewarding career.

Semesters 5 & 6	**(22 hours/week)**	
	Colour T.V. Studio Production 1 & 2	6 + 6
	16mm Motion Picture Production 1 & 2	2 + 2
	35mm Audio Visual Prod. 1 & 2	2 + 2
	Elective Courses (Students must choose a minimum of 2*)	
Semesters 5 & 6	**Electives**	
	Production Management 3 & 4	2 + 2
	Script Writing 5 & 6	2 + 2
	Directing 3 & 4	2 + 2
	Film & T.V. Camera 1 & 2	2 + 2
	Sound Recording & Mixing 3 & 4	2 + 2
	Post Production 3 & 4	2 + 2
	Animation 3 & 4	2 + 2

Journalism

North Campus

Six semesters beginning September

Most people's lives are affected by the news media: newspapers, magazines, television, and radio. The public has come to expect responsible, ethical reporting and high standards among those who practice journalism.

Humber's Journalism Program provides training in professional skills and instills a commitment to the concept of a free press, a cornerstone in a democratic society. The day is passing when an aspiring journalist without the appropriate education can easily find work in the news media. To meet this need, Humber's program offers a series of courses to develop writing and editing techniques and styles in all media. It is augmented with a selection of academic courses aimed at providing a broad, general education.

In the third year of the Program, students specialize in the medium of their choice: newspapers, magazines, television, or radio. These entail considerable hands-on laboratory experience with Coven, the students' twice-weekly newspaper, Magazine World, a quarterly magazine, a professionally-operated colour television studio, and with closed-circuit studios of the Radio Broadcasting Program.

Third-year students also acquire first-hand experience as they intern with area media, including daily and weekly newspapers, magazines, broadcasting stations, and wire services.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- Pre-admission assessment and interview

Curriculum

Semester 1	**(23 hours/week)**	**Credits**
	Fundamentals of Reporting	6
	Media of Print & Broadcast Journalism	2
	Political Science 1	3
	Communications 1	4
	Keyboarding for Electric Editing	2
	General Studies (2)	6
Semester 2	**(28 hours/week)**	
	Basic Black & White Photo.	3
	Radio News 1	2
	T.V. News 1	3
	Intro. to VDT's	1
	Newspaper Reporting 1	6
	Journalism Notetaking	3
	Communications 2	4
	General Studies (2)	6
Semester 3	**(26 hours/week)**	
	Newspaper Layout & Design	2
	Editorials/Reviews/Copy Editing	2
	Magazine Writing 1	2
	News Photography	2
	T.V. News 2	3
	Radio News 2, & Voice Train.	2
	Newspaper Reporting 2	2
	Sociology	3
	Psychology	3
	Conversational French 1	3
Semester 4	**(26 hours/week)**	
	Journalism Seminar	2
	Magazine Layout & Design	2
	Basic TV Production	3
	Critique 1	1
	Magazine Writing 2	2
	Radio News 3	2
	T.V. News 3	3
	Newspaper Reporting 3	2
	Political Science 2	3
	Economics	3
	Conversational French 2	3

Job Opportunities

Humber's Journalism graduates can usually find work in their area of specialization. They work as reporters and copy editors with: community newspapers, local and metropolitan dailies, and consumer magazines. Many work as reporters and announcers in small-community television and radio stations, as newsletter editors, and in corporate and government information services. In future, they will be engaged in information-gathering and dissemination with the emerging media technologies.

Students must choose either the Print or Broadcast pathway

Print Pathway

		Credits
Semester 5	**(21 hours/week)**	
	Labour Reporting/Journalism & Law	2
	Press Time 1	10
	Print Management	2
	Critique 2	1
	Logo 1	6
	Print Internship 1	16
	Videotex Survey	1
	20th Century History	2
	The Media and PR	1
Semester 6	**(14 hours/week)**	
	Press Time 2	10
	Logo 2	6
	Cast Studies	2
	Print Internship	16

Broadcast Pathway

Semester 5	**(20 hours/week)**	
	TV News 4	5
	Radio News 4	3
	Videotex Survey	1
	Writing for Radio-Commercials	2
	Labour Reporting/Journalism & Law	2
	Newsroom Management	2
	Broadcast Research	2
	Broadcast Internship	16
	The Media and PR	1
	20th Century History	2
Semester 6	**(10 hours/week)**	
	Case Studies	2
	Broadcast Internship 2	16
	TV News 5	4
	Radio News 5	2
	Broadcast Research	2

Music Program

North Campus

Six semesters beginning September

Unique in Canada, our Music Program has risen to national and even international acclaim. Its renown stems from a dedication to teaching relevant commercial music, its stage bands, recordings, alumni and faculty.

While all students take the same courses in the first year, you may then choose from three major areas: writing, performing or a combination of both. During these three years at Humber, you will participate extensively in musical ensembles and be encouraged to compose original music and arrange existing repertoire for performance.

If you aspire to sing professionally, you will be interested in our dynamic vocal program. Although you will take the same courses as the instrumentalists, you will also join vocal jazz ensembles and gain valuable experience by singing with Humber's bands and combos.

Each semester vocalists and instrumentalists receive private lessons.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- audition and music theory assessment
- Important: When filling out your application for the Music program, please indicate your major instrument on the form.

Job Opportunities

Graduates find work in the areas of performing, teaching, arranging, composing and copying.

Curriculum

Common First Year

Semesters 1 + 2	Credits
Major Instrument 1 + 2	4 + 4
Major Instrument Workshop 1 + 2	2 + 2
Ensembles/Improvisation 1 + 2	4 + 4
Theory 1 + 2	4 + 4
Functional Keyboard 1 + 2	2 + 2
Ear Training 1 + 2	2 + 2
Jazz History/American Popular Music 1 + 2	2 + 2
Communications 1 + 2	4 + 4

After this first common year, students will be taking courses tailored to their major area of study; writing skills, performance or a combination of both.

A Combination of Writing and Performance Skills

Semesters 3 + 4 (24 hours/week)	
Major Instrument 3 + 4	4 + 4
Ensembles/Improvisation 3** + 4**	4 + 4
Theory 3 + 4	2 + 2
Ear Training 3 + 4	2 + 2
General Studies	3 + 3

Additional credits to a minimum of 24 each semester will be selected from the following courses and music electives: Arranging, Composition, Functional Keyboard, Solo performance, Repertoire Development, Music Electives.

*Functional Keyboard 3 & 4 for non keyboard majors is a required course if either Arranging or Composition is taken by any student.

Semesters 5 + 6 (24 hours/week)	
Major Instrument 5 + 6	4 + 4
Ensembles/Improvisation 5** + 6**	4 + 4
General Studies	3 + 3

Additional credits to a minimum of 24 each semester will be selected from the following courses and music electives: Arranging, Composition, Orchestration, Solo Performance, Repertoire Development.

Elective choices are available to students in first, second and third year who have obtained advanced standing in any required course.

**The Music Faculty will allocate students to the appropriate ensembles.

Performance Major		
Semesters 3 + 4 (24 hours/week)		**Credits**
	Major Instrument 3 + 4	4 + 4
	Ensembles/Improvisation 3** + 4**	8 + 8
	Theory 3 + 4	2 + 2
	Ear Training 3 + 4	2 + 2
	Solo Performance 3 + 4	3 + 3
	Repertoire Development 3 + 4	2 + 2
	General Studies	3 + 3
Semesters 5 + 6 (25 hours/week)		
	Major Instrument 5 + 6	8 + 8
	Ensembles/Improvisation 5** + 6**	8 + 8
	Solo Performance 5 + 6	4 + 4
	Repertoire Development 5 + 6	2 + 2
	General Studies	3 + 3
Writing Skills Major		
Semesters 3 + 4 (25 hours/week)		
	Major Instrument 3 + 4	4 + 4
	Ensembles/Improvisation 3** + 4**	4 + 4
	Theory 3 + 4	2 + 2
	Ear Training 3 + 4	2 + 2
	Functional Keyboard 3 + 4	2 + 2
	Arranging 3 + 4	4 + 4
	Composition 3 + 4	4 + 4
	General Studies	3 + 3
Semesters 5 + 6 (23 hours/week)		
	Major Instrument 5 + 6	4 + 4
	Ensembles/Improvisation 5** + 6**	4 + 4
	Arranging 5 + 6	4 + 4
	Composition 5 + 6	4 + 4
	Orchestration 5 + 6	2 + 2
	Music Elective	2 + 2
	General Studies	3 + 3

Music Electives Include: Voice/Percussion/Woodwinds/Careers and Finances/Music Teaching/Keyboard/Others As Announced
Ensembles: Big Bands/Wind Ensemble/Combos/Vocal Ensembles/Reading Ensembles

North Campus

Six semesters beginning September

Today's society demands accountability and responsible behaviour from both the public and private groups which make our life what it is. Obtaining goodwill through responsible action and ensuring the timely and accurate dissemination of information about an organization's operation is the core of modern public relations. Humber's program will prepare you for the demanding job of a professional public relations practitioner. In addition to the theory underlying modern Public Relations practices, you will use the various tools available to the PR practitioner from publicity to advertising, research to marketing, audio-visual presentations to film and TV. You will learn through practice and start writing your first stories and presentations on your typewriter from the first day.

In your sixth semester you will have the opportunity to work for four months in a public relations environment. Your future employer will be looking for these qualities: ability to write clearly and concisely with meticulously correct usage, painstaking attention to detail, enthusiasm, perseverence and the ability to understand other people's points of view.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- pre-admission interview at which an aptitude test will be written

Curriculum

Semester 1	(24 hours/week)	Credits
	PR Writing 1 and PR Lab 1	4
	Effective Speech 1	2
	Introduction to PR & Case Studies	4
	Business Procedures & Marketing for PR	4
	Economics for PR	3
	Communications 1	4
	General Studies	3
Semester 2	**(25 hours/week)**	
	PR Writing 2 and PR Lab 2	4
	Effective Speech 2	2
	Introduction to Radio	2
	Personal Dynamics	4
	Communications 2	4
	Political Science 1	3
	General Studies Electives (2)	6
Semester 3	**(21 hours/week)**	
	PR Writing 3 and PR Lab 3	4
	Layout & Production for Print 1	3
	Intro. to Advertising	2
	Practical PR 1	2
	Elements of FILM/TV	2
	A/V Techniques for PR	2
	PR Research	2
	Photography for PR Practitioners	1
	General Studies	3
Semester 4	**(24 hours/week)**	
	PR Writing 4	4
	PR Lab 4	4
	Layout & Production for Print 2	3
	Seminar 1	3
	Case Studies 2	2
	Advertising Writing for PR	2
	Elements of Fund Raising	2
	Group Dynamics	4

Job Opportunities

Graduates from the Public Relations Program have a wide variety of employment areas to chose from: corporate PR, special events, promotional work, publicity, fund raising, union PR, education PR, government, and PR associated with sales and marketing, with personnel, and with product promotion.

Semester 5	(22 hours/week)	Credits
	PR Writing 5	2
	PR Lab 5	8
	Seminar 2	3
	Practical PR 2	2
	Persuasion & Promotion	4
	Computers for PR	1
	Layout & Production for Print 3	2
Semester 6	**(2 hours/week)**	
	Field Work	2

Radio Broadcasting

North Campus

Six semesters beginning September (also offered on weekends in four semesters)

Radio broadcasting is a competitive industry with a demand for highly qualified professionals in all of its segments. Humber's Radio Broadcasting Program continues to lead the field in radio education. It is designed to develop the 'total broadcaster'. Students are taught every aspect of the profession: writing, announcing, production, management, sales, programming, technical work, music direction, promotion, interviewing techniques, news and sport writing. Because the program maintains contact with the public and private sectors of the industry,

Curriculum

Semester 1	(23 hours/week)	Credits
	Intro. to Radio	2
	Op. and Engineering 1	2
	Radio Lab 1	2
	Keyboarding 1	4
	Political Science 1	3
	Human Relations	3
	Communications 1	4
	General Studies	3
Semester 2	**(23 hours/week)**	
	Writing for Radio 1	2
	Announcing Techniques 1	2
	Broadcast Techniques	4
	Operating & Engineering 2	2
	Radio Lab 2	2

	Keyboarding 2	2
	Communications 2	4
	Radio News 1	2
	General Studies	3
Semester 3	**(24 hours/week)**	
	Radio Drama 1	2
	Retail Radio Sales	2
	Communications Theory	2
	Writing for Radio 2	4
	Announcing Techniques 2	4
	Radio Production 1	2
	Linguistics 1	3
	Radio News 2	2
	General Studies	3
Semester 4	**(24 hours/week)**	
	Radio Drama 2	2
	Writing For Radio 3	4
	Broadcast Research & Marketing 1	4
	Announcing Techniques 3	2
	Radio Production 2	2
	Linguistics 2	3
	Radio News 3	2
	National Radio Sales 1	2
	General Studies	3
Semester 5	**(18 hours/week)**	
	Radio Seminar	2
	Radio Lab 3	5
	Writing for Radio 4	4
	Announcing Techniques 4	4
	Broadcast, Research, Market. & Nat. Radio Sales 2	2
	The Media and PR	1
Semester 6	**(37 hours/week)**	
	Internship	35
	Case Studies	2

course content is relevant and reflects current needs. 'Hands-on' training is provided through the two closed-circuit radio stations operated by the program. Students in third year are all given opportunities to train at radio stations in the Metro Toronto area.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- pre-admission interview and writing/vocal skills assessment

Job Opportunities

Graduates have found work all over Canada and, in fact, entry positions are normally in the smaller communities. Many of our broadcasters have become household names in the communities they serve.

Theatre Arts

North Campus

Six semesters for the Performance option, four, in the Technical option

Humber's Theatre Arts Program offers two distinct options one toward acting (Performance) and the other toward production (Technical). Both these callings are satisfied through a wide range of practical courses designed to prepare students for work in professional theatre.

Performance Option

The curriculum for performance students includes: Acting Techniques, Movement, Voice, Text Analysis, Audition Techniques, Singing, Dance, Improvisation and Drama studies. Students learn by doing, through class productions and Mainstage Productions with performance on and off campus.

Additional performance and production opportunities are provided in association with the Film and Television and the Radio Broadcasting programs.

Theatre Technology Option

This option entails working in such areas as stage management, carpentry, drafting, design, properties, costume and special effects. Much of the student's time is also spent in cooperative work or field placement either as part of the Department's mainstage and workshop productions or with professional and community theatres.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- pre-admission interview and audition (for Performance option)
- students with previous practical experience will feel more comfortable in the audition/interview

Curriculum

Performance Option

Semester 1	(25 hours/week)	Credits
	Fundamentals of Theatre 1	2
	Performance 1	6
	Movement 1	3
	Voice 1	3
	Communications 1	4
	General Studies	3
	Singing 1	2
	Improv. Text Analysis 1	2
Semester 2	**(25 hours/week)**	
	Fundamentals of Theatre 2	2
	Performance 2	6
	Movement 2	3
	Voice 2	3
	Communications 2	4
	General Studies	3
	Singing 2	2
	Improv. Text Analysis 2	2
Semester 3	**(25 hours/week)**	**Credits**
	Fundamentals of Theatre 3	2
	Performance 3	12
	Movement 3	3
	Voice 3	3
	Improv. Text Analysis 3	2
	General Studies	3
Semester 4	**(25 hours/week)**	
	Fundamentals of Theatre 4	2
	Performance 4	12
	Movement 4	3
	Voice 4	3
	Improv. Text Analysis 4	2
	General Studies	3
Semester 5	**(22 hours/week)**	**Credits**
	Performance 5A	4
	Movement 5	3
	Voice 5	3
	Dance 1	2
	Mainstage Production 1	6

	Performance 5B	2
	Performance 5C	2
Semester 6	**(22 hours/week)**	
	Performance 6A	4
	Performance 6B	2
	Performance 6C	2
	Movement 6	3
	Voice 6	3
	Audit. Portfolio 1	2
	Mainstage Production 2	6

Technical Option

Semester 1	**(24 hours/week)**	**Credits**
	Fundamentals of Theatre 1	2
	Carpentry 1	3
	Properties 1	3
	Analysis for Design 1	2
	Stage Management 1	4
	Communications 1	4
	General Studies	3
	Costume	3
Semester 2	**(25 hours/week)**	
	Fundamentals of Theatre 2	2
	Lighting Technology	3
	Sound Tech. 1	2
	Production Management 1	3
	Analysis for Design 2	2
	Properties 2	3
	Communications 2	4
	General Studies	3
	Finance 1	3
Semester 3	**(25 hours/week)**	**Credits**
	Fundamentals of Theatre 3	2
	Lighting Design 1	4
	In Service Apprenticeship	9
	Sound Techniques 2	2
	Analysis for Design 3	3
	Special Effects 1	2
	General Studies	3

Interests and Skills

- self-discipline, concentration and maturity
- ability to work as part of a team

Job Opportunities

Graduation is an important step toward success in professional theatre. In recent years, all graduates of Humber Theatre have found employment within six months as performers, production assistants and stage managers.

Expected Workload

Both options are demanding on time and energy and require a firm commitment to a work pattern similar to that found in professional theatre. Much of the course work extends far beyond the normal classroom timetable.

Semester 4	(26 hours/week)	
	Fundamentals of Theatre 4	2
	Carpentry 2	4
	Production Management 2	3
	Special Effects 2	2
	In Service Apprenticeship	9
	Analysis for Design 4	3
	General Studies	3

Advertising and Graphic Design

North Campus

Four semesters beginning September

Humber's Advertising and Graphic Design Program provides a firm foundation of drawing, design and rendering techniques that a talented young designer requires.

Students are given working, studio-related experience in the design of graphics for newspapers, magazines, direct mail, outdoor advertising, corporate image, packaging, point-of-purchase, television and computer design graphics. The program involves illustration, cartooning, photography, lettering and typography in layout, art and assembly for the various methods of reproduction and printing.

In two years you will learn what you need, to develop into a creative and competent graphic designer. We will help you realize your ability to put ideas on paper through courses in design, drawing and typography, in a way that will appeal to your future clients. The integration of photography and computer graphics will give you two more skills and an introduction to the roles played by computer technology in visual communications. To create practical concepts, you will need to know the basics of reproduction and the current methods in use in the graphic art field. To achieve this field, practice is essential, requiring dedication and hard work.

The Graphic designer's concern is the promotional aspect of social need and future technologies. Graphic designers interact with industrial designers who give form to the product and with package designers who create the container. The graphic designer creates the visuals to sell the product.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- pre-admission interview with presentation of a portfolio made of 20 or more pieces and a sketch book to demonstrate your design and drawing skills and establish your level of competency

Curriculum

Semester 1	(24 hours/week)	Credits
	Graphics 1	2
	Typography 1	3
	Design 1	3
	Studio Methods 1	2
	Advertising 1	1
	Photography for Graphics 1	3
	Perspective 1	3
	Communications 1	4
	General Studies Elective	3
Semester 2	**(24 hours/week)**	
	Graphics 2	2
	Typography 2	3
	Design 2	3
	Studio Methods 2	2
	Advertising 2	1
	Photography for Graphics 2	3
	Perspective 2	3
	Communications 2	4
	General Studies Elective	3
Semester 3	**(24 hours/week)**	
	Graphics 3	8
	Typography 3	3
	Illustration 1	4
	Mechanicals 1	3
	Packaging	3
	General Studies Elective	3
Semester 4	**(24 hours/week)**	
	Graphics 4	8
	Typography 4	3
	Illustration 2	4
	Mechanicals 2	3
	Perspective 3	2
	Intro. to Computer Graphics	1
	General Studies Elective	3

Job Opportunities

The program prepares the student for employment in graphic design studios, advertising agencies, TV graphic studios, printing companies, magazine/newspaper/book publishers, point-of-purchase, direct mail, package design units and in computer business graphics. Freelance activity provides further opportunity. A developing employment area is the graphic production and in-house departments in corporations and institutions.

Additional Costs

- An initial investment of $600+ for art equipment and supplies is necessary. Throughout the program students should be prepared to spend approximately $200 per semester in replacing consumable supplies.

Industrial Design

North Campus

Six semesters beginning September

Look around you ... almost everything you see which is man-made originated as an idea in a designer's mind. Industrial Design is the discipline of giving form to tomorrow's products and environments. So, if you want to combine your creativity, your concern for the environment, a technical interest in how things are made and a desire to improve people's lives, this design program is for you.

To become a well-rounded designer able to shape tomorrow's products, you will have to become familiar with aesthetics, colour, style trends, shapes and materials, as well as manufacturing processes and human factors. You will learn to develop products and furniture for all types of residential, industrial and commercial purposes.

We will help you develop your ability to put ideas on paper (Design Presentations) in a way that will appeal to your clients (Design Applications/Design Futures).

Form Study and Model Making (Machine Technology) will help you to visualize future products before they are produced. You will also be introduced to the roles played by computer technology in product development. (Computers and Design).

Admission Requirements

- Ontario Secondary School Graduation Diploma
- interview with samples of your sketches, photographs of your hobbies, craftwork, artwork, school projects, etc.

Curriculum

		Credits
Semester 1	**(24 hours/week)**	
	Industrial Design 1	4
	Technical Communications 1	3
	Design Presentations 1 (Drawing Fundamentals)	4
	Elements of Design	3
	Modelmaking 1	4
	History of Art	2
	Communications 1	4
Semester 2	**(24 hours/week)**	
	Industrial Design 2	5
	Technical Communications 2	3
	Design Presentations 2	3
	Design Applications	3
	Art History	2
	Communications 2	4
	General Studies	3
Semester 3	**(18 hours/week)**	
	Industrial Design 3	5
	Design Presentations 3	3
	Materials & Processes 1	4
	Design Futures	3
	Design Graphics	2
	History of Industrial Design	2
Semester 4	**(19 hours/week)**	
	Industrial Design 4	5
	Design Presentations 4	3
	Materials & Processes 2	4
	Systems Development 1	3
	Computers & Design	2
	General Studies	3

Semester 5	(19 hours/week)	
	Industrial Design 5	6
	Advanced Materials Applications	2
	Systems Development 2	3
	Thesis 1	3
	Ergonomics	2
	General Studies	3
Semester 6	**(19 hours/week)**	
	Industrial Design 6	6
	Thesis 2	5
	Portfolio	3
	Design Management	2
	General Studies	3

Interests and Skills

- ability to transform an idea into practical applications
- strong interest in the arts and in how things work in relation to people
- willingness to work hard, pride in accomplishment and independent mind

Job Opportunities

Design has become important in today's business world. Our graduates find positions at different levels depending on their abilities. Sometimes they work as designers of commercial products, other times, as support staff for the research/design process. They are involved in product support (showroom design, model making), product promotion (coordination of brochures and photography), product research (market/consumer reactions), technical work (production planning, quality control, drafting and computer-aided design).

A few years after you graduate, you may work as a product designer for a manufacturer or in a consulting design office. You might design products such as home appliances, sporting goods, hardware, electronic equipment or furniture.

Expected Workload

You can expect to work hard and long hours if you strive for quality projects.

Additional Costs

- You can plan on $300-$400 per semester for books and supplies. A $100 deposit on tools will be refunded when you return all the tools in good condition.
- Industrial Design relates to other design programs in that all of them develop an inquisitive mind and excellent creative visual skills. The product designer is usually more concerned with the practical aspects of social need, technology, and giving form to future products.

Interior Design

North Campus

Six semesters beginning September

Creativity, imagination, drawing skills, interest in living and work spaces are the attributes of the Interior Designer.

Humber's program provides the graduate with the knowledge and skills to analyse and solve interior design problems. It emphasizes such areas as space planning, construction technology, colour theory, specification writing, lighting, presentation techniques, and materials to ensure that the graduates of Interior Design can become effective members of a professional design team. Our interior design program has an exceptionally high reputation both in Canada and the United States. Humber students participate yearly in major international student competitions and are consistently winning major awards. In the sixth semester students are given opportunities to gain practical experience working in interior design offices.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- pre-admission interview with presentation of a portfolio and a studio skills test

Curriculum

		Credits
Semester 1	**(25 hours/week)**	
	Interior Design	5
	Drafting & Detailing 1	5
	Art History 1	2
	Freehand Drawing 1	3
	Design Theory 1	2
	Colour Theory	2
	Interior Basics	2
	Communications 1	4
Semester 2	**(28 hours/week)**	
	Interior Design 2	8
	Drafting & Detailing 2	5
	Art History 2	1
	Freehand Drawing 2	3
	Perspective & Rendering	3
	Materials 1	2
	Textiles	2
	Communications 2	4
Semester 3	**(26 hours/week)**	
	Interior Design 3	10
	Drafting & Detailing 3	3
	Art History 3	2
	Perspective & Rendering 2	3
	Materials 2	2
	Graphics	2
	Lighting 1	2
	General Studies Elective	3
Semester 4	**(27 hours/week)**	
	Interior Design 4	10
	Drafting & Detailing 4	2
	Art History 4	2
	Perspective & Rendering 3	3
	Materials 3	2
	Photography	3
	Professional Practice	2
	Intro to Computer Aided Design	1
	Lighting 2	2
Semester 5	**(23 hours/week)**	
	Interior Design 5	9

	Drafting & Detailing 5	3
	Perspective & Rendering 4	2
	Design Theory 2	2
	Aesthetics	2
	General Studies Elective	3
	Mechanical Systems	2
Semester 6	**(18 hours/week)**	
	Interior Design 6	9
	Drafting & Detailing 6	3
	Perspective & Rendering 5	2
	Merchandising	2
	Environmental Studies	2

In-Office Practice
(3 weeks apprenticeship)

Job Opportunities

Graduates find employment in interior design firms, store planning divisions of major department stores, government agencies (Department of Public Works, Department of Transport, etc.), architectural offices, contracting firms and furniture manufacturers. In addition, opportunities exist for freelancing.

Additional Costs

- Approximately $500.00 per academic year.

Package Design

North Campus

Six semesters beginning September

One of the most common items to be found in a consumer society is the package. Humber's unique Package Design Program is dedicated to the training of young men and women in the design, manufacturing and marketing of packaging in its many forms.

You will be involved in graphic design, three-dimensional design, the relationship of design objectives to technological and marketing requirements, materials and their limitations, and the economics of the packaging industry.

Curriculum

		Credits
Semester 1	**(24 hours/week)**	
	Packaging Graphics 1	3
	Packaging Design 1	3
	Packaging Typography 1	3
	Marketing Design Obj. 1	2
	Packaging Technology 1	3
	Packging Studio Methods 1	3
	History of Packaging 1	3
	Drawing 1	3
	Communications	4
Semester 2	**(26 hours/week)**	
	Packaging Graphics 2	3
	Packaging Typography 2	3

The program emphasizes the psychology of colour and design, product protection, government regulations affecting the package, printing and reproduction processes, and the impact of consumerism on the design process. During the fifth semester, students are given the opportunity to specialize. In the sixth semester students are placed in cooperative work situations in design studios, packaging plants, packaging printers, and research facilities involved with package design.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- counselling interview
- presentation of a portfolio

Job Opportunities

Package designers find positions in design studios and in various industrial areas. You could specialize in structural design for corrugated and paper board plants. You could produce camera-ready artwork for printing houses or photo engravers. Some graduates have gone into sales, research or marketing for large packaging houses. A more recent area is the computer graphic design which will expand in the coming years.

Expected Workload

You can expect to work hard and long hours to attain the level of quality required in the industry.

Additional Costs

- You can plan to spend from $300-$400 per semester for art supplies and equipment.

	Packaging Technology 2	2
	Packaging Studio Methods 2	3
	Packaging Research 2	2
	Technical Illustration 1	3
	Perceptions & Colour	3
	Communications 2	4
	General Studies	3
Semester 3	**(25 hours/week)**	
	Packaging Research 3	1
	Materials & Testing 1	2
	3-Dimensional Design 1	8
	Printing Processes 1	3
	Packaging Machinery 1	2
	Government Regulations 1	3
	Marketing Design Obj. 2	3
	General Studies	3
Semester 4	**(22 hours/week)**	
	Packaging Research 4	1
	Materials & Testing 2	2
	3-Dimensional Design 2	7
	Printing Processes 2	2
	Packaging Machinery 2	1
	Resource Management	3
	Public Relations	2
	Intro. to Computer Graphics	1
	General Studies Elective	3
Semester 5	**(22 hours/week)**	
	Packaging Research 5	2
	Packaging for the Future	3
	General Studies Elective	3
One of the following options:		
	Graphic Design Option	14
	Package Design Option A +	14
	Business or Technology Elective Package Design Option B +	14
	Business or Technology Electives (2)	
Semester 6	**(8 hours/week)**	
	Cooperative Program (Field Work)	6
	Packaging Research 6	2

Arena Management

North Campus

Three semesters (two of which are field work) starting in May

This program is designed to provide qualified graduates for certification as Arena Managers under legislation of the Province of Ontario. Management of an arena requires the skillful coordination of the functions of planning, purchasing, administration, refrigeration, promotion, programming and related public services. A combination of classroom and practical work will equip the participants with a broad range of training in the management skills in the complex operation of private and community arenas.

Admission Requirements

•two years of previous post secondary study in Recreation Leadership or two years of equivalent experience in an arena

Job Opportunities

The employment rate is excellent, but most graduates enter the field in maintenance jobs or as arena attendants. After three to four years of field experience, advancement to management positions is possible. In a city arena with a $200,000 budget and five or six employees, a serious graduate could eventually earn a salary between $24,000 and $30,000.

Curriculum

Semester 1	(24 hours/week)	Credits
	Structure and Finance	4
	Program Scheduling 1	2
	Intro. to Accounting	2
	Refrigeration and Ice Making	4
	Arena Construction, Design and Maintenance	4
	Concessions 1	2
	Personnel Administration	2
	Field Orientation 4 (for Recreation Leadership graduates)	4
	Communications 1 (for students with experience)	4

Semester 2 and 3

Supervised field work under the guidance of certified arena personnel and college staff in an arena approved by the College and the Ontario Arena Association Inc. All students will have to successfully complete a series of assignments by correspondence and Diploma graduates will attend a five-day session at the college in late March.

Recreation Leadership

Lakeshore Campus

Four semesters beginning September

This four-semester program is designed to train professional personnel in the areas of leadership, organization, administration, supervision and evaluation of a variety of recreation programs and facilities serving all ages. The curriculum will combine academic and professionally-related courses, skill laboratories, residential seminars, field practice and conference and workshop involvement into a significant learning experience. To satisfy the field practice requirements, direct experience in specific recreation agencies or departments is emphasized in the last three semesters.

Admission Requirements

- Ontario Secondary School Graduation Diploma or equivalent
- detailed resume and two letters of reference
- medical certificate signed by the physician

Interests and Skills

- experience in the recreation field in a leadership capacity
- general awareness of the nature and scope of recreation and career expectations consistent with the program content
- understanding of human behaviour and ability to relate effectively with a variety of people
- ability to independently participate in all recreation activities and outdoor education/recreation skills sessions

Job Opportunities

Graduates of this program will find opportunities in a variety of recreational agencies including: the municipal government, therapeutic institutions, conservation authorities and outdoor education centres, volunteer agencies, correctional institutes, private organizations, and commercial establishments.

After a few years, the practitioner will be equipped to function at a management level where more administrative tasks are performed. Most positions involve flexible schedules, often requiring some evening and weekend work.

Each semester there are additional travel or residential recreational experiences which are important to the learning process and raise the profile of our students with future employers.

These additional activities are subsidized by the College with a minimal fee of $200 per year to cover travel and living expenses charged to each participating student. Alternative comprehensive projects are assigned to those students who may be unable to attend.

Curriculum

		Credits
Semester 1	(23 hours/week)	
	Intro to Recreation & Leisure Services	6
	Leisure Programming 1	4
	Advanced Emergency Care	3
	Field Practice 1	3
	Intro to Psychology	3
	Communications 1	4
Semester 2	(25 hours/week)	
	Leadership & Group Dynamics	2
	Recreation Facilities	4
	Leisure Programming 2	5
	Human Growth & Development	3
	Field Practice 2	7
	Communications 2	4
Semester 3	(24 hours/week)	
	Outdoor Education/Recreation	4
	Philosophy of Leisure	3
	Recreation Personal Management	4
	Recreation Finance	3
	Intro to Sociology	3
	Field Practice 3	7
Semester 4	(24 hours/week)	
	Physical Fitness	2
	Recreation Administration	6
	Recreation for Specific Populations	3
	Field Practice 4	7
	General Studies Elective (2)	6

North Campus

Post Diploma Program of Three Semesters (One Being a Field Placement)

The combination of business and technical content of this program will provide the graduate or mature student with the knowledge required to operate a ski area business. Because the ski industry is still developing, openings exist for those who have the required skills and education.

Admission Requirements

- Mature student with two seasons of experience in at least one aspect of a ski resort or hotel or
- graduate of the Recreation Leadership or the Hospitality Management program.

Job Opportunities

For mature students, this program will usually bring them a step higher than the position they held before the course. But for those who had no experience, the entry jobs will probably be snowmaker, rental shop attendant, lift operator or ski instructor. Opportunities exists across Canada and relocation may be required.

In time, graduates reach the supervisory level up to middle management positions at larger resorts. In smaller resorts, they become area managers. Other jobs exist in ski shops or schools, in the merchandising of snow-making and grooming machinery, and in the distribution of ski equipment to retailers.

Curriculum

Semester 1	C/30 hours/week)	Credits
	Ski Lift Operation & Maintenance 1	3
	Snowmaking & Hillgrooming 1	3
	Rental Shop Operation	2
	Principles of Accounting	2
	Ski Resort Management	3
	Area Layout and Design 1	2
	Ski Area Field Research	4
	Beverage Management	4
	Marketing	3
	Communications	4
Semester 2	**(4 winter months)**	
	Field Work	7
Semester 3	**(21 hours/week)**	
	Ski Resort Food Management	3
	Ski Patrol & Risk Management	3
	Ski Lift Operation & Maintenance 2	3
	Area Layout & Design 2	3
	Ski School Management	2
	Ski Resort Personnel Administration	3
	Marketing Communications	2
	Introduction to Computers	3

A major educational field trip is included to give a realistic view of the industry and its personnel. A $150 fee will cover travel and living expenses. Alternative comprehensive projects are assigned to students unable to go on the field trip. Field placement positions range from rental shop, snowmaking, ski instructing to ski patrol. You are encouraged to find your own job anywhere in Canada, but you will be assisted by a college supervisor if necessary.

Travel and Tourism

Lakeshore Campus

Four semesters beginning September and January

You will learn to work effectively in positions that require very good communication skills, sales techniques, organization and experience in office procedures and business practices. You will become thoroughly familiar with many manuals used in the travel industry, ticketing, travel destinations and a wide range of current travel products. Accuracy and attention to details will constantly be stressed. This program does not qualify our graduates for careers as flight attendants.

Admission Requirements

- Ontario Secondary School Graduation Diploma or equivalent

Job Opportunities

Some of the areas where our graduates have found work are: travel counselling, wholesale and tour operations, accommodations and transportation. Most entry positions are in sales, reservations, and ticketing. Initially, the pay is low since the positions are usually at a junior level. As the travel industry is affected by seasonal travel patterns, many jobs require employee flexibility because of irregular working hours. After a few years of experience you may move into middle management positions.

Expected workload and expenses

Some courses require considerable self-directed learning. During the second year, students are assigned to working locations within metro Toronto for field practice. You shoud plan for some travel expenses. Depending on the availability of accommodations, students may wish to take the opportunity to go on an orientation trip to a major tourist destination.

Curriculum

		Credits
Semester 1	**(25 hours/week)**	
	Tourism 1	2
	Destinations Travel Geog.	4
	Basic Ticketing	3
	Travel Techniques A 1	3
	Travel Techniques A 2	3
	Communications 1	4
	General Studies (2)	6
Semester 2	**(26 hours/week)**	
	Tourism 2	4
	Tariff & Ticketing 1	4
	Office Procedures	3
	Computer Concepts	2
	Communications 2	4
	General Studies (2)	6
	Keyboarding	2
Semester 3	**(22 hours/week)**	
	Tourism 3	4
	Tariff & Ticketing 2	4
	Field Practince 1	3
	Product Update 1	2
	Travel Techniques B 1	3
	Travel Techniques B 2	3
	Salesmanship	3
Semester 4	**(19 hours/week)**	
	Tourism 4	3
	Tariff & Ticketing 3	4
	Travel Techniques "C"	3
	Product Update 2	2
	Field Practice 2	3
	Canadian Business Methods	3
	Computer Update	2

Field Trip

Two three-week placements will be arranged by a college supervisor during the last two semesters.

Horticulture (Apprenticeship)

North Campus

Basic 12-week course beginning November

Advanced 8-week course beginning February

This intensive program stresses practical learning through laboratory work in the college greenhouse, construction laboratory and arboretum. The only subjects unrelated to horticulture are an introduction to business and a course in communications. These courses provide the students with essential skills in today's business world.

Admission Requirements

- grade 10 (Ontario)
- applicant must be working in the horticulture industry (landscape maintenance/construction, greenhouse/nursery/garden centres, parks departments, golf courses, arborist)
- registration through the local apprenticeship branch office

Job Opportunities

Skilled labour in areas listed above in the beginning to move on later into jobs with more responsibilities such as foreman or manager.

Curriculum

Semester 1
Landscape Surveying
Turf Management
Plant Identification
Plant Propagation
Landscape Maintenance
Communications
Introduction to Business
Landscape Construction
Small Engine Maintenance
First Aid and Safety
Soils
Entomology

Virtually all costs are funded by CEIC, and the apprentice in College receives unemployment benefits and may be eligible for additional support. You will need work clothes, safety boots, gloves, a hard hat and secateurs.

Jockey Training

North Campus

This program is offered next in May, 1986, and lasts 10 weeks

The spectacle of thoroughbred horse racing is thrilling, dynamic and everchanging. To reach this final pinnacle of race riding the aspiring jockey must first spend several years learning about horses, care, basic riding, galloping techniques, working horses, breaking from the gate and apprenticing for a minimum of one year.

Humber College's ten-week Jockey Training Program provides young people with the preliminary training required for a successful start in such a career. Also, since the percentage of apprentice jockeys with the necessary talent, strength, size and feel to go on to become journeymen jockeys is relatively small, the program also provides back-up training for exercise riding and grooming.

Curriculum

Semester 1		
	Fundamental Equitation	45 hours
	Basic Exercise Riding	50 hours
	Physical Education and Weight Control	30 hours
	Practical Horse Care	90 hours
	Life Skills	30 hours
	Racing as an Industry and as a Sport	15 hours
	Field Work	20 hours

Admission Requirements

- personal interview
- age 16 to 18 is recommended
- applicants should weigh approximately 100 pounds
- literate in the English language
- a medical certificate confirming suitability for requirements of a Jockey license
- some experience with horses to verify interest in horses and an understanding of the kinds of jobs available
- Students currently enrolled in Secondary School:
- For some students, in certain secondary school programs, it may be possible to obtain special permission from the school principal to attend the Jockey Program and return to write high school examinations. It must be recognized, however, that such decisions are made by the principal only where appropriate make-up work can be arranged. Secondary school students considering this should contact their principal no later than five months before the commencement date of the Jockey Training Program.

Job Opportunities

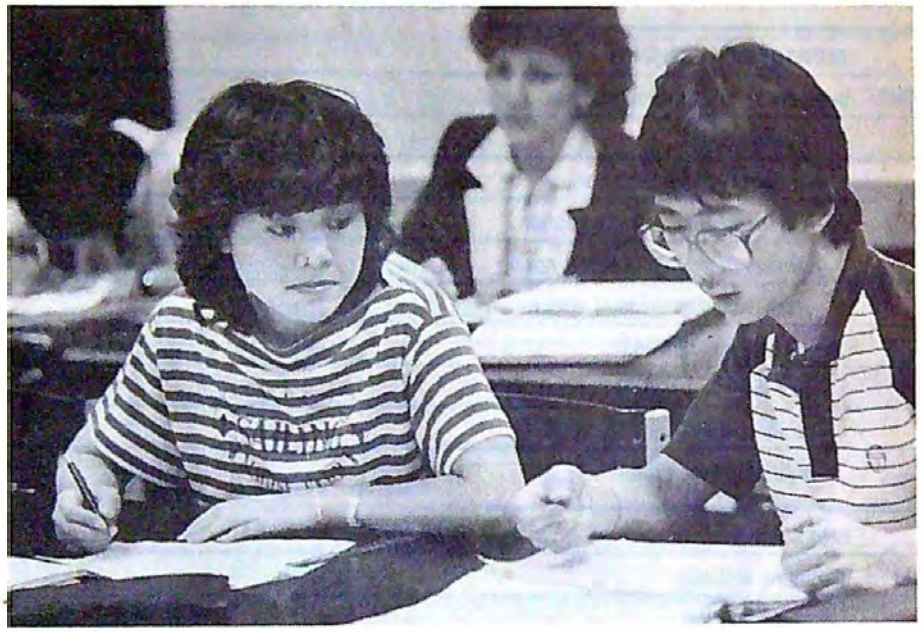
Graduates of the program will find employment at the various tracks and racing farms throughout Ontario and the western provinces. Starting positions may involve the graduate as a hot walker, groom or exercise rider, depending on the individuals past experience with horses and their degree of expertise.

Additional Costs

- Riding boots and helmet (approximately) $140

For further information on this program contact: The Equine Centre Humber College 205 Humber College Blvd. Rexdale, Ontario M9W 5L7 (416) 675-3475

Business 200



BUSINESS

Accountancy Diploma***

North and Lakeshore Campuses

Four semesters starting September

***New Program (North)**

Six semesters starting September 1985

This program is designed to assist students in forming a base of studies so that they can assume the duties of an accountant in today's changing economy. In addition to accounting procedures, the program offers training in data processing, marketing, tax and corporate law, and management studies.

Admission Requirements

- Ontario Secondary School Graduation Diploma (or completion of the Accountancy Assistant Certificate program at Keelesdale)
- Mathematics Assessment test to place students at their appropriate level
- grade 12 academic or commercial maths, as well as English composition courses or equivalents

Note: A mathematics assessment test will be given to students to place them at their appropriate level.

Job Opportunities

The graduates of the Accounting Programs find jobs in accounts payable, accounts receivable, cost accounting, inventory control, internal auditing and payroll departments.

If you are seeking a professional designation, taking this program is a good way to start. Within two or three years of graduation it is possible for you to become a C.G.A. (Certified General Accountant) or an R.I.A. (Registered Industrial Accountant) as the respective accounting associations will allow credits from this program toward their professional designations.

Curriculum

Semester 1	
	Introduction to Accounting 1
	Personnel
	Elements of E.D.P.
	Marketing 1
	Micro Economics
	Communications 1
	General Studies Elective
Semester 2	
	Introduction to Accounting 2
	Business Mathematics
	Elements of Systems
	Communications 2
	Macro Economics
	General Studies Elective
Semester 3	
	Cost Accounting 1
	Intermediate Accounting 1**
	Elements of Law 1
	Organizational Management 1
	Business Statistics
Semester 4	
	Cost Accounting 2*
	Intermediate Accounting 2*
	Introduction to Income Tax
	Organizational Management 2
	General Studies Elective

*Equivalent to 1 1/2 courses
**Equivalent to 2 courses

Students may graduate in the four semester program or continue on and graduate after completing the additional courses set out in semesters five (5) and six (6)

Semester 5	
	Quantitative Analysis 1
	Income Tax 2
	Computer Accounting 1
	Financial Controllorship 1
	Advanced Accounting 1

Semesters 1 to 4 as shown. The courses offered in semesters five and six include more advanced accounting courses and also place an emphasis on Finance and Computer Applications. Successful graduates will receive additional credits towards receiving their professional designation as described on previous page.

Semester 6	
	Internal Auditing
	Computer Accounting 2
	Financial Controllorship 2
	Advanced Accounting 2**

La Bureautique

Lakeshore

32 Semaines

Renseignements Généraux

La Bureautique: fonctionnement des systèmes informatisés est un programme de 32 semaines qui permet aux participants de se familiariser de facon théorique et pratique avec des systèmes informatisés de bureau.

Les cours se donnent en français et le travail pratique se fait avec des logiciels bilingues.

Conditions D'Admission

- DESO Diplôme d'Etudes Secondaires de l'Ontario
- ou Niveau 4: Cours Préparatoires à la Formation Professionnelle
- Dactylo 40 mots/minute

Possibilites d'emploi

Adjoint administratif
Secrétaire de direction
Traiteur de textes

Aide Financière

- La Main d'oeuvre du Canada
- Ce programme a été approuvé par la Commission de l'emploi et de l'immigration du Canada. Si vous devenez éligible, la commission paiera les frais d'inscription et vous remettra une allocation hebdomadaire pour la durée des cours. Pour obtenir des renseignements au sujet de l'éligibilité au programme, contacter le Centre d'emploi du Canada.
- Prêt aux Etudiants
- Le gouvernement de l'Ontario possède un plan de prêt pour les étudiants qui y sont éligibles. Les conditions d'admission au plan sont:
  - avoir 18 ans ou plus et
  - être citoyen canadien ou posséder un statut officiel d'immigrant.
- Pour obtenir des renseignements sujet des prêts et subventions. contacter Le Financial Aids Office du College Humber au (416) 675-3111 ou 252-5571.

Curriculum

1er Semestre	
	Eléments de base en informatique
	Initiation à la programmation du micro-ordinateur
	Initiation à la comptabilite
	Traitement de textes 1
	Rédaction de rapports
	Le bureau et les systèmes informatisés
2ieme Semestre	
	Processus d'enregistrement
	Systèmes de communication des données
	Traitement des textes et des données en finances et en comptabilité
	Traitement de textes 2 (avancé)
	Relations interpersonnelles
	Initiation aux affaires

Computer Information Systems Diploma

North Campus

Six semesters beginning September.

To meet the increased technical demands, growth and widespread use of computers in business, and the corresponding need for skilled graduates in this profession, Humber College is offering a three-year Computer Information Systems Program.

Each year of this program offers progressively more professionally oriented courses.

Included in the curriculum are courses on the major computer languages (BASIC, COBOL, PL/I and Assembler), systems analysis and design, and advanced topics relating to data base, communications networks, systems audit and security, and systems structure and management.

Curriculum

Semester 1	
	Elements of E.D.P.
	Business Mathematics
	Marketing 1
	Accounting Concepts 1
	Personnel
	Communications 1
	General Studies Elective
Semester 2	
	Programming Techniques*
	Introduction to Programming
	Organizational Management 1
	Accounting Concepts 2
	Communications 2
	General Studies Elective

*Must be taken with or after Intro. to Programming, but not before.

Semester 3	
	Cobol 1
	System Control Functions
	Organization Management 2
	Elements of Law 1
	Systems Analysis 1
	General Studies Elective
Semester 4	
	Business Statistics
	Cobol 2
	Data Base
	Systems Analysis 2
	Micro Economics
	General Studies Elective

Admission Requirements

- Ontario Secondary School Graduation Diploma or mature student status
- Grade 12 academic or commercial mathematics, as well as English composition courses or equivalents

Note: A mathematics assessment test will be given to students to place them at their appropriate level.

Job Opportunities

Graduates of this program will be able to enter the demanding and highly dynamic area of information systems in a wide range of modern business environments. They will be able to progress in such careers as: computer operations, programming, systems analysis and design, or eventually into management.

Semester 5	
	Assembler 1
	Network Design and Architecture
	Structured Systems Analysis
	Comparative Systems
	Data Base Administration and Design
	Project Management
Semester 6	
	Applied Programming Methodology
	Systems Structure and Management
	System Audit, Controls & Security
	Program Products Seminar
	Small Business Computer Applications
	Management by Communication

Computer Programming Co-op Diploma

North Campus

Six semesters beginning September or January

This program offers an educational opportunity in Computer Programming with a unique combination of academic training and 'on-the-job' experience. For four academic semesters the successful, mature candidate will undergo studies in computer programming, systems and related areas. These academic semesters are basically the same as the 64-week Computer Programming program and compare favourably with the three-year Computer Information Systems program.

During the Co-op program, students will alternate the academic semesters with two semesters of related work experience. During this time, successful students will be employed in the data processing field to become aware of the real-life business situation and prepare them for a career in this profession. The work term will also offer the student an understanding of the various computer-related career paths.

Since the work terms are an integral part of the program, they will be treated as academic credits with an assignment component.

Admission Requirements

- Ontario Secondary School Graduation Diploma or equivalent, plus two years of business experience or equivalent
- mature student status and an on-campus interview
- grade 12 academic or commercial mathematics, as well as English
- composition courses or equivalents

Note: a mathematics assessment test is required to place students at their appropriate level

Curriculum

Semester 1	
	Introduction to E.D.P.
	Programming Fundamentals
	Programming Techniques
	Accounting Concepts 1
	Business Math*
	Communications 1
	General Elective
	*A math assessment test is required before this course begins
Semester 2	
	Cobol 1
	Intro to Systems Analysis 1
	System Control Functions
	Accounting Concepts 2
	Business Elective
	General Elective
Semester 3	
	Work Term
Semester 4	
	Cobol 2
	Data Base
	Introduction to Systems Analysis 2
	RPG
	Business Statistics
	General Elective
Semester 5	
	Work Term

Job Opportunities

The program produces a graduate who enters the business community as a valuable member of an information-processing team, generally at the junior or maintenance programmer level. Opportunities for advancement in this field are excellent particularly if additional courses are taken to maintain an edge on this exciting and changing field.

Semester 6

- Assembler 1
- Network Design and Architecture
- Program Products Seminar
- System Audit, Control and Security
- Data Base Administration and Design
- Applied Programming Methodology

Computer Programming

North Campus

Sixty-four weeks starting September, January or May

This program is essentially an upgraded version of our highly successful one year (52 week) program. The successful, mature candidate will be a person with several years of business experience or one who is transferring from another college or university. For four academic semesters, the student in this program will undergo studies in computer programming, systems and related areas. These academic semesters are basically the same as the Computer Programming Co-op program and compare favourably with the three-year Computer Information Systems program.

The program starts three times per year (September, January and May) and students graduate at the end of four consecutive semesters without the normal summer semester break of most other programs.

A number of students in this program receive sponsorship from CEIC, but this still leaves a number of openings for other applicants to the program.

Admission Requirements

- Ontario Secondary School Graduation Diploma or equivalent or mature student status
- aptitude test may be required
- grade 12 academic or commercial mathematics, as well as English composition courses or equivalents

Note: a mathematics assessment test will allow the Division to place students at their appropriate level.

Curriculum

Same as semesters 1, 2, 4 and 6 on preceding page (Computer Co-op).

Data Processing Diploma

North Campus

Four semesters beginning September.

The objective of this two-year program is to provide the student with a broad knowledge of the data processing function in today's modern business environment. This enables the graduate to function as an entry-level programmer or as a knowledgeable end-user of data processing.

Admission Requirements

- Ontario Secondary School Graduation Diploma or equivalent
- aptitude test may be required
- grade 12 academic or commercial mathematics, as well as English composition courses or equivalents

Note: A mathematics assessment test will allow the Division to place students at their appropriate level.

Job Opportunities

Upon completion of the program, the graduate should be able to function either as a junior programmer or in any other capacity where a knowledge of small and/or large computers is a requirement, such as, a familiarity with user application software package.

Curriculum

Semester 1	
	Elements of E.D.P.
	Business Mathematics
	Marketing 1
	Accounting Concepts 1
	Personnel
	Communications 1
	General Studies
Semester 2	
	Programming Techniques*
	Programming Fundamentals
	Organizational Management 1
	Accounting Concepts 2
	Communications 2
	General Studies
Semester 3	
	Cobol 1
	RPG 2
	Intro to Systems Analysis 1
	Organizational Management 2
	Elements of Law 1
	General Studies
Semester 4	
	4th Generation Languages
	Small Business Computer Applications
	System Control Functions
	Business Statistics
	Micro Economics
	General Studies

*Must be taken with or after Programming Fundamentals, but not before.

Microcomputer Business Applications

Lakeshore Campus

Three semesters beginning September.

This program will train students to operate a microcomputer in a business environment. Graduates will have a detailed knowledge of accounting practices, mailing lists, inventory control, word processing, and work scheduling. Not only will they be able to design and program their own business software but they will also be able to customize commercial products to suit the needs of their employers. They will learn about various types of microcomputers and the strengths and weaknesses of each. The use of the peripherals (disk drives, printers, modems, etc.) will be a part of the course. Language skills will enable them to communicate with their fellow workers and they will also have the ability to produce high quality documentation to be used with the computer programs. Word processing interfacing techniques, programming, and keyboarding will all form a part of the program.

Curriculum

Semester 1	
	Introduction to Accounting 1
	Business Mathematics
	Personnel
	Elements of E.D.P.
	Micro Programming 1
	Micro Fundamentals
	Business Report Writing
Semester 2	
	Introduction to Accounting 2
	Automated Office Mgmt.
	Hardware & Software Systems
	Organizational Management 1
	Comparative Languages 1
	Micro Programming 2
	Micro Systems Analysis 1
Semester 3	
	Automated Accounting Systems
	Comparative Micro Languages 2
	Microcomputer Applications
	Data Base Management Systems*
	Business Presentations
	Statistics

*Denotes double course

Job Opportunities

Graduates working in a business office may be involved in microcomputer applications in payroll, general ledger, accounts payable, accounts receivable, invoices, mailing lists, inventory, word processing, and work scheduling. Others may be employed in professional offices by pharmacists, doctors, lawyers and dentists.

Openings are being created in libraries, schools, hospitals, computer stores, and sales forces. With some experience, you may wish to become consultant in this rapidly changing field. Employment can also be found in such areas as process control, machine and environmental control in small manufacturing, retail and service concerns, as well as small divisions of larger corporations that are now able to use their own computer.

Office Systems Operations

Lakeshore Campus

Two semesters beginning September

This program will train students to operate and manage an office information system. Graduates will be able to perform all the basic and advanced word processing functions (text preparation, document management, etc.), on a minimum of three different word processors. They will be able to operate other information systems such as records processing, data communications, personal and decision support.

Admission Requirements

- Ontario Secondary School Graduation Diploma or equivalent
- typing speed of 40 net words per minute

Job Opportunities

Most sectors of business and industry require now, or will require in the near future, information processing personnel. Graduates of the Office Systems Operations will find entry positions in word processing, information processing and administrative functions. Promotions to word processing supervisor and administrative assistant levels could occur after a period of work experience.

Curriculum

Semester 1
Elements of E.D.P.
Spread Sheet – Software
Intro to Accounting 1
Basic Word Processing*
Business Report Writing 1
Automated Office Systems 1
Semester 2
Business Report Writing 2
Records Processing
Data Communication Systems
Data & Word Processing in Accounting & Finance
Advanced Word Processing*
Interpersonal Skills
Intro to Business

*Denotes double course

An Introduction to Management Studies

MANAGEMENT STUDIES

The Management Studies Diploma Programs at Humber College provide the student with a thorough background in all aspects of basic management training. In line with our goal of meeting the needs of the student, we have adopted what is referred to as the 'through-way option' concept. This concept provides the student with the highest degree of flexibility in choosing courses appropriate to individual career goals.

The Business Administration Diploma Program (36 courses, three years, six semesters) offers, in addition to the regular stream, options in Operations Management, Management Systems, and Marketing Management.

The General Business Diploma Program (25 courses, two years, four semesters) offers options in the following areas:
Business Management
Personnel Management
Legal Assistant
Approved Specialized Areas

Since both these programs generally provide a common core of required business courses in the first two semesters, transfers in the first year from program to program, if handled with proper consultation, can be achieved relatively easily.

The following options are available:

(A) The student may enter at the first-semester level into the Business Administration Diploma program, with the goal of attaining the three-year diploma. The student may, however, in consultation with the Management Studies Program Coordinator, change programs at an appropriate time, and elect to graduate after two years with the General Business Diploma in one of the recognized options, or may choose to enter another Business Program. The student should be aware that following this option might entail picking up additional courses.

(B) The student may enter at the first-semester level into the General Business Diploma program and graduate after two years in a recognized option.

(C) The student may enter at the first-semester level into the General Business Diploma program, and at an appropriate time, in consultation with the appropriate Program Coordinators, transfer to one of the other Business Division Diploma Programs (Accounting, Marketing, etc.). The student should be aware that following this option might entail picking up additional courses in professionally related areas.

(D) After graduating from a two-year Business Diploma program, a student may enter into the third year (semester 5) of the Business Administration Diploma Program. The student should be aware that this option will entail picking up additional courses in professionally related areas.

(E) The student may enter at levels higher than first semester, upon receiving advanced standing for courses completed in Grade 13, at another College of Applied Arts & Technology or at University with prior academic counselling from the Management Studies Program Coordinator. The student may enter either the General Business or the Business Administration Diploma Program at the determined level. It must be emphasized that proper and timely academic counselling by the Management Studies Program Coordinator is important in all of the above options.

PART-TIME STUDIES

The Management Studies Department offers several management certificates in the evening. A student may choose any of the following areas of study.
Business Administration Certificate
Business Management Certificate
General Business Certificate
Operations Management Certificate
Personnel Management Certificate

These certificate programs would be of interest to people currently within the industry, or for the more mature person wishing to gain entrance to this field and other business programs on a part-time basis.

For further information, please consult the Continuous Learning brochure, or call 675-5016 or 252-5571.

Business Administration Diploma*

North and Lakeshore Campuses

Six Semesters Beginning September

This diploma program provides students with practical and comprehensive knowledge of all basic business functions, such as: accounting, human resource management, marketing and computer usage.

Admission Requirements

- Ontario Secondary School Graduation Diploma or equivalent, or mature student status
- aptitude test may be required
- grade 12 academic or commercial mathematics, as well as English composition courses or equivalent

Note: A mathematics assessment test will enable the Division to place students at their appropriate level.

Job Opportunities

Three-year Business Administration graduates are extremely well received by the business community. Regular option graduates normally accept employment in junior management positions in areas such as: general management, sales, sales promotion, production and distribution. Management Systems option graduates accept employment in areas generally related to production and inventory control, methods and procedures analysis, and information processing and control. Operations Management graduates typically accept positions in production control, production and inventory management, product quality assurance and methods improvement.

Curriculum

All options follow a common curriculum in the first year (2 semesters) of the program.

Semester 1
Personnel
Marketing 1
Elements of E.D.P.
Introduction to Accounting 1
Micro Economics
Communications 1

Semester 2
Elements of Law 1
Business Mathematics
Marketing 2
Introduction to Accounting 2
Macro Economics
Communications 2

Marketing Management option graduates generally begin in the areas of retail and wholesale sales and in general marketing administrative positions. Further specialization may be offered in the sales promotion, advertising, and distribution areas. In the past, graduates have also attained management positions after a period of training and work experience.

Students interested in Office Systems Administration please refer to 216.

Regular Option

North Campus

This option allows for a higher concentration in Economics studies, as well as for a degree of choice with four business electives in semesters 4 and 5.

Curriculum

Semester 3	
	Managerial Accounting
	Organizational Management 1
	Elements of Systems
	Business Statistics
	General Studies
	Plus one of:
	International Economics
	Money, Banking & Finance
	Economic Development
Semester 4	
	Organizational Management 2
	Quantitative Analysis 1
	Manufacturing Operations
	Business Elective
	General Studies
	Plus one of:
	International Economics
	Money, Banking & Finance
	Economic Development
Semester 5	
	Business Policy 1
	3 Business Electives
	2 General Studies
Semester 6	
	Business Policy 2
	Personnel Management & Development
	Computer Applications
	Corporate Finance
	Quantitative Analysis 2
	Advanced Marketing Administration

Management Systems Option

North Campus

In response to the current competitive environment, business managers are turning to Electronic Data Processing (E.D.P.) systems to improve both the efficiency and effectiveness of the firm's operation. Moreover, E.D.P. effectiveness depends not only on the E.D.P. specialist, but on the ability of managers to understand its implication and effectively manage and control its implementation. The Management Systems Option of the Business Administration program is designed to enhance the student's understanding of this area.

Curriculum

Semester 3	
	Quantitative Analysis 1
	Business Statistics
	Managerial Accounting
	Organizational Management 1
	Programming Fundamentals
	2 General Studies
Semester 4	
	Intro. to Systems Analysis 1
	Advanced Marketing Administration
	Quantitative Analysis 2
	Organizational Management 2
	Manufacturing Operations
	General Studies
Semester 5	
	Intro. Systems Analysis 2
	Cobol 1
	Systems Structure and Management
	Business Policy 1
	2 General Studies
Semester 6	
	Structured Systems Analysis
	Small Business Computer Applications
	Comparative Systems
	Business Policy 2
	Personnel Management & Development
	Corporate Finance

Marketing Administration Option

North Campus

This option will enable the Business Administration student to acquire specific background in the consumer marketing field. Basic training in marketing strategies will be provided in the early semesters. Training in advanced theories is scheduled for the final year. The student will be able to choose from four broad areas of specialization. These include the areas of marketing research, advertising and sales, marketing logistics and retail operations.

Curriculum

Semester 3	
	Business Statistics
	Managerial Accounting
	Organizational Management 1
	Elements of Systems
	Elements of Advertising
	General Studies
Semester 4	
	Quantitative Analysis 1
	Organizational Management 2
	Marketing Research
	Manufacturing Operations
	2 General Studies
Semester 5	
	Salesmanship
	Business Policy 1
	Quantitative Analysis 2
	Marketing Research 2 OR
	Physical Distribution
	Fundamentals of Retailing 1 OR
	Advanced Advertising
	General Studies
Semester 6	
	Computer Applications in Marketing
	Advanced Marketing Administration
	Business Policy 2
	Personnel Management and Development
	Corporate Finance
	Export Marketing OR
	Sales Management OR
	Fundamentals of Retailing 2 OR
	Marketing of Micro Computers

Microsystems Management Option

North Campus

To meet the needs of business for microcomputer-oriented Business Administration graduates, the Microsystems Management Option has been developed.

Graduates of this option will have applied their knowledge of accounting, inventory control, scheduling, etc. to microcomputer application. They will learn to design and program business software, customize commercial software to specific application. They will learn to use various types of microcomputers and peripheral hardware. The Business Administration Program is adjusted by replacing the eight business electives with the following microsystem courses:

Curriculum

Semester 3

- Micro Fundamentals
- Micro Programming 1
- Micro-Systems Analysis 1
- Micro-Programming 2
- Comparative Language 1
- Hardware and Software Systems
- Micro Applications
- Data Base Management

Operations Management Option

North Campus

In order to respond to the need for highly-qualified graduates in the manufacturing community, the Operations Management Option has been structured to allow the Business Administration Graduate to specialize in such important areas as methods improvement, purchasing, production and inventory control, work measurement and physical distribution. This option also provides the graduate with management-related courses necessary for a successful manufacturing environment.

Curriculum

Semester 3	
	Managerial Accounting
	Organizational Management 1
	Elements of Systems
	Business Statistics
	Manufacturing Operations
	General Studies
Semester 4	
	Organizational Management 2
	Quantitative Analysis 1
	Advanced Marketing Administration
	Methods Improvement
	Principles of Purchasing
	General Studies
Semester 5	
	Business Policy 1
	Work Measurement
	Production and Inventory Management
	Physical Distribution
	2 General Studies
Semester 6	
	Business Policy 2
	Personnel Management & Development
	Computer Applications
	Corporate Finance
	Quantitative Analysis 2
	Facilities Planning

General Business Diploma

North and Lakeshore Campuses

Four semesters beginning September.

A basic business education is provided for students taking the regular Business Management Option. The program also offers the opportunity to specialize in a particular field of interest.

Admission Requirements

- Ontario Secondary School Graduation Diploma or equivalent
- aptitude test may be required
- grade 12 academic or commercial mathematics, as well as English composition courses or equivalent.
- Students must be interested in a service-oriented career.

Note: A mathematics assessment test will be given to students to place them at their appropriate level.

Curriculum

All options follow a common curriculum in the first year (two semesters) of the program except where noted(*):

Semester 1

Personnel
Marketing 1
Elements of Law
Intro. to Accounting 1
Micro Economics
Communications 1
General Studies

Semester 2

Organizational Management 1
Business Mathematics*
Elements of E.D.P.
Communications 2
2 General Studies*

After semester two, students choose one of the following options:

Business Management option
Personnel Management option
Approved Specialized option
Legal Assistant option

*Commercial Law 254-130 for Legal Assistant plus 1 General Studies Elective.

Approved Specialized Options

There are circumstances where students have particular management training requirements. Therefore, a tailored program may be structured with the assistance of the program coordinator from a wide variety of credit courses offered by the College. All specialized options must be approved.

Personnel Management Option

Graduates generally do not receive positions directly in the personnel area of organizations but in departments which, with some additional in-house training, eventually lead to personnel positions. Career goals for these graduates are in the areas of in-house training, program supervision, benefits management, employment interviews, and labour contract administration.

Curriculum

Semester 3	
	Organizational Management 2
	Elements of Salary & Benefits Administration
	Business Statistics
	Manufacturing Operations
	Business Elective
	General Studies
Semester 4	
	Personnel Management & Development
	Elements of Pension Plans and Group Insurance
	Labour Relations
	3 Business Electives

Business Management Option

This option eventually leads experienced graduates to supervisory and management positions in business and industry. Entry-level jobs are at a more junior level. You may wish to take this option to obtain a general management background and slightly tailor your program by your choice of electives.

Curriculum

Semester 3	
	Organizational Management 2
	Business Statistics
	Manufacturing Operations
	Elements of Systems
	Intro. to Accounting 2
	General Studies
Semester 4	
	Marketing 2
	Quantitative Analysis 1
	Macro Economics
	3 Business Electives

Legal Assistant Option

North Campus

Legal Assistant graduates are hired by organizations such as large and small law firms, government departments and their agencies, life and general insurance companies, trust companies and others. Their duties generally require them to perform tasks with some legal complexity without requiring the extensive training of a lawyer, for example, title searches, conveyancing, document preparation, real estate closings and claims adjusting.

Curriculum

Semester 3	
	Organizational Management 2
	Real Estate 1
	Family Law
	Elements of Salary & Benefits Administration
	Criminal Litigation
	General Studies
Semester 4	
	Real Estate 2
	Will and Intestate
	Basic General Insurance
	Court Procedures
	Labour Relations
	General Studies

Marketing Diploma

North and Lakeshore Campuses

Four semesters beginning September.

The aim of this program is to introduce students to the broad scope of marketing in today's consumer market. Emphasis is placed on the analysis of new product decisions, distribution, promotion, and pricing strategies and their administration in practice.

The program offers several specialization options through the choice of marketing electives. Initially, semesters one and two familiarize students with the basic state of the art. Semesters three and four offer the choice of a specific career option in the general marketing and merchandising areas. For further information, contact the Program Chairman.

Admission Requirements

- Ontario Secondary School Graduation, or equivalent
- Grade 12 academic or mathematics, as well as English composition courses. Students will be pretested with a mathematics and English assessment test to assist in determining a student's starting level in these subjects.
- Note: the math assessment test is required before the course begins.

Job Opportunities

- This program generally leads to retail and wholesale sales and general marketing positions. Other entry jobs may include customer service, distribution or management trainee. If you need more specific information on the placement of our graduates, come to our Placement Office to research the job listings.

Curriculum

Semester 1	
	Personnel*
	Marketing 1*
	Business Mathematics*
	Intro. to Accounting 1*
	Communications 1
	General Studies
Semester 2	
	Elements of Law 1*
	Marketing 2*
	Fundamentals of Retailing 1
	Elements of E.D.P.*
	Micro Economics*
	Communications 2
	General Studies

*Core subjects are basic Business courses that are a prerequisite to the Marketing Administration course.

Marketing Elective Courses Offered In Third And Fourth Semesters:

Physical Distribution
Sales Promotion
Advanced Advertising
Sales Management
Fundamentals of Retailing 2
Starting a New Business
Export Marketing
Computer Applications in Marketing
Marketing of Micro Computers
Retail Buying for General Merchandising
Visual Merchandising Strategies
Dynamic Entrepreneurship and Your Success Strategies

Curriculum

Semester 3

- Elements of Advertising
- Salesmanship
- Organizational Management 1
- Marketing Research
- Business or Marketing Elective
- General Studies

Semester 4

- Marketing Administration
- Organizational Management 2
- 2 Marketing Electives
- Business or Marketing Elective
- General Studies

General Marketing Option

In the third and fourth semesters, students will select five marketing and/or busines courses that best match their needs and abilities. A minimum of three marketing courses must be chosen. This option is suitable to the individual who wants a more general marketing and/or sales background.

Job Opportunities

- Employment can be found in sales, marketing trainee positions, distribution, and marketing administrative support areas.

Curriculum

Semester 3

- Elements of Advertising
- Marketing Research
- Salesmanship
- Organizational Management 1
- Fundamentals of Retailing 2
- General Studies

Semester 4

- Marketing Administration
- Organizational Management 2
- Sales Management
- Physical Distribution
- Sales Promotion
- General Studies

Merchandising Management Option

In the third and fourth semesters, students seeking a retail orientation will follow the curriculum outlined here. Retailers such as department stores and specialty shops are among Canada's largest employers.

Job Opportunities

- Most of the products we buy come from retail outlets, large or small. Sales and management opportunities in the merchandising and retail fields are abundant.

Retail Co-op Diploma

North Campus

Four consecutive semesters beginning September

Retailing is an industry of continuous change, variety and excitement. It is fast moving, competitive, and at all times challenging. In many respects, retailing requires greater skills for survival and success than any other business. Successful retailers must learn to combine the rigid requirements of science with the creative aspects of art. Retail activities such as market research, inventory control and financial planning require the discipline of a science. Other activities such as personal selling, interior store design, advertising, merchandising and display demand creativity and innovative thinking.

The Retail Co-op Program is a unique program offered by Humber College in cooperation with the Retail Council of Canada. It is specifically designed to train the student in current retail skills in the above areas, and to provide an opportunity to practice those newly-learned skills in paid on-the-job training with a suitable retail company.

Admission Requirements

- Ontario Secondary School Graduation Diploma or equivalent
- grade 12 mathematics
- completed interview sheet, retail skills test, interview by a member of the program faculty or representative from the retail industry
- completed interview with the company with which a student will work during the industry component of the co-op program
- Although every effort is made to match the candidate with a suitable retail placement, the College cannot guarantee that a job will be available for all applicants. Previous retail work experience is beneficial but not essential.

Curriculum

The program will cover four consecutive semesters, each composed of an in-college theoretical portion, and an "on-the-job" unit in which course material will be put to practical application.

Semester 1	
	Orientation to Retailing
	EDP Retail
	Retail Math
	Sales and Selling Skills
	Retail Accounting
	Communications 1*
Semester 2	
	Receiving and Inventory Procedures
	Inventory Management Principles
	Store Planning & Merchandising
	EDP Retail
	Communications 1*
	General Studies
Semester 3	
	Visual Merchandising
	Retail Advertising and Promotion
	Selling/Sales Management
	Buying Orientation
	Distribution Centres
Semester 4	
	Customer Relations
	Portfolio Presentations
	Internship
	Communications 2
	General Studies

*To be taken in both semesters; a half course per semester.

Additional Costs

- There may be relocation expenses involved, depending on placement, during the co-op period. Textbooks and supplies first year $175, second year $75, approximately.

Job Opportunities

At the entry level of retailing, the following positions can be obtained: management trainee, department and chain stores, Assistant Buyer, speciality and chain stores, assistant in inventory management, display or advertising.

Executive Secretary Diploma

North Campus

Four semesters beginning September and January

This program will provide the training needed to prepare the student for the role of secretary to a business executive. In addition to developing skills in shorthand, machine transcription and keyboarding, emphasis is placed on specialized fields such as engineering, architecture, personnel, public relations, finance, government and transportation.

Admission Requirements

- Ontario Secondary School Graduation Diploma or equivalent
- grade 12 English
- minimum keyboarding speed of 30 nwpm (40 gwpm) is required to enter first semester
- For direct entry into semester 2, please refer to the requirements stated in the curriculum. For further information contact the Program Coordinator.

Job Opportunities

Graduates may look for a rewarding career in government, private industry, business or the professions.

Graduation Requirements

Keyboarding: 60 gwpm (50 nwpm minimum) (within 3 errors)
Shorthand – 100 wpm minimum
An overall average of 60% in final year (minimum requirement to graduate).

Curriculum

Semester 1

Requirements: Keyboarding: 40 gwpm (30 nwpm minimum) Shorthand: Nil

- Simulated Office Environment 1
- Notetaking for Business
- Elements of Accounting
- Introductory Communications

Semester 2

Requirements for Direct Entry: Keyboarding 50 gwpm (40 nwpm minimum) (within 4 errors) Shorthand: 60 wpm minimum.

- Executive Office Simulations
- Exec. Shorthand 1
- Word Processing and Concepts 1
- Communications 1
- General Studies

Semester 3

Requirements: Keyboarding 50 gwpm (40 nwpm minimum) (within 3 errors) Shorthand: 80 wpm minimum

- Exec. Office Procedures 2
- Exec. Machine Transcription 2
- Exec. Shorthand 2
- D.P. Office Systems
- Communications 2
- 2 General Studies

Semester 4

Requirements: Keyboarding 55 gwpm (45 nwpm minimum) (within 3 errors) Shorthand: 90 wpm minimum

- Executive Simulations 3
- Office Administration Procedures
- Office Communications Networks 1
- General Studies

Legal Secretary Diploma

North Campus

Four semesters beginning September.

The objective of this program is to provide training in the specialized skills, procedures and knowledge required to function efficiently as a legal secretary in a law office or legal department of government or industry.

In addition to training in principles of law, the preparation and application of basic legal documents in the areas of real estate, civil litigation, corporate and estate, – the program includes word processing concepts and instruction on word processing equipment. Emphasis on English proficiency is reinforced by required communication courses; a selection of required general studies enhances the student's educational background.

Admission Requirements

- Ontario Secondary School Graduation Diploma or equivalent
- grade 12 English
- minimum keyboarding speed of 30 nwpm (40 gwpm) is required to enter first semester
- For direct entry into Semester 2, please refer to the requirements stated in the curriculum. For further information contact the Program Coordinator.

Job Opportunities

Employment opportunities may be found in private law firms, and in business or government legal departments.

Graduation Requirements

Keyboarding: 60 gwpm (50 nwpm minimum) (within 3 errors).

Shorthand: 100 wpm (minimum).

An overall average of 60% in final year (minimum requirement).

Curriculum

Semester 1	
	Requirements: Keyboarding 40 gwpm (30 nwpm minimum) Shorthand: Nil
	Simulated Office Environment 1
	Notetaking for Business
	Elements of Accounting
	Introductory Communications
Semester 2	
	Requirements for direct entry: Keyboarding 50 gwpm (within 4 errors) (minimum) Shorthand: 60 wpm (minimum)
	Legal Secretarial Procedures 1
	Legal Shorthand 1
	Elements of Law 1
	Communications 1
	General Studies
Semester 3	
	Requirements: Keyboarding 55 gwpm (within 3 errors) Shorthand: 80 wpm (minimum)
	Legal Secretarial Procedures 2
	Legal Shorthand 2
	Word Processing and Concepts 1
	Communications 2
	General Studies
Semester 4	
	Requirements: Keyboarding 55 gwpm (within 3 errors) Shorthand: 90 wpm (minimum)
	Legal Secretarial Procedures 3
	Legal Shorthand 3
	Office Communications Networks 1
	2 General Studies

Medical Secretary Diploma

North Campus

Four semesters beginning September, and January.

The student will receive training in the specialized skills required for employment in doctors' offices, hospitals, medical labs, health departments, and government health agencies, etc. The student will also have experience performing simulated medical secretary functions, such as keeping patient records and accounts, scheduling appointments and handling insurance and compensation forms. A St. John Ambulance First Aid course is also part of the program.

In semester 4, students receive practical experience, one day per week in medical and related fields.

Admission Requirements

- Ontario Secondary School Graduation Diploma or equivalent
- grade 12 English
- minimum keyboarding speed of 30 nwpm (40 gwpm) is required to enter fimester

Job Opportunities

Upon graduation, the student may look for a career in hospitals, medical labs, health departments, government agencies or seek employment in doctors offices.

For direct entry into Semester 2 of a Diploma Program, please refer to the individual Executive, Legal or Medical Diploma Program curricula. For further information contact the Program Coordinator.

Graduation Requirements

Keyboarding: 60 gwpm (50 nwpm minimum) (within 3 errors).

Shorthand: NIL.

An overall average of 60% in final year (minimum requirement to graduate).

Curriculum

Semester 1

	Requirements: Keyboarding 40 gwpm (30 nwpm minimum)
	Simulated Office Environment 1
	Notetaking for Business
	Elements of Accounting
	Introductory Communications
	Introductory Communications
	Requirements for direct entry: Keyboarding 50 gwpm (40 nwpm minimum) (within 4 errors) Shorthand: Nil

Semester 2

	Medical Science 1
	Medical Office Procedures
	Medical Machine Transcription 1
	Word Processing and Concepts 1
	Communications 1
	General Studies
	Requirements: Keyboarding 50 gwpm (40 nwpm minimum) (within 3 errors) Shorthand: Nil

Semester 3

	Medical Science 2
	Medical Office Procedures 2
	Medical Machine Transcription 2
	Office Communications Networks 1
	Communications 2
	General Studies
	Requirements: Keyboarding 55 gwpm (45 nwpm minimum) (within 3 errors) Shorthand: Nil

Semester 4

	Medical Science 3
	Medical Administrative Procedures*
	Medical Machine Transcription 3
	Canadian Business Methods
	2 General Studies

*Includes First Aid (St. John Ambulance)

Office Systems Administration Program

North Campus

Six semesters beginning September and January.

This program has been designed to train the student to be responsible to management for the intercommunication, and inter-action of a specific department within a large or complex organization, or to be an office administrator for a less structured company. The graduate will be a self-reliant individual, able to operate keyboarding functions, and be computer literate in basic computer functions. The graduate will also have a good knowledge of business math, and be competent in the area of accounting. Reports and statistical writing will be included in the course of study.

Admission Requirements

- Ontario Secondary School Graduation Diploma or equivalent
- grade 12 English and mathematics
- minimum keyboarding speed of 30 nwpm (40 wpm) is required to enter first semester

Job Opportunities

There is a demand for graduates with solid training in high technology requirements within the office. Emphasis in this program is on the development of organizational and management skills.

Graduation Requirements

Keyboarding: 60 gwpm (50 nwpm minimum within 3 errors) and an overall average of 60% in final year (minimum requirement to graduate).

Curriculum

Requirements: Keyboarding 40 gwpm (30 nwpm)
Shorthand: Nil

Semester 1

- Simulated Office Environment 1
- Word Processing and Concepts 1
- Elements of Accounting
- Introductory Communications
- General Studies

Requirements: Keyboarding 50 gwpm (40 nwpm minimum) (within 4 errors)

Semester 2

- Simulated Office Environment 2
- D.P. Systems
- Office Communications Networks 1
- Business Math
- Communications 1
- General Studies

Requirements: Keyboarding 50 gwpm (40 nwpm minimum) (within 3 errors)

Semester 3

- Elements of Systems
- Office Communications Networks 2
- MathPac/AlphaSort
- Personnel
- Communications 2
- General Studies

Requirements: Keyboarding 55 gwpm (45 nwpm minimum) (within 3 errors)

Semester 4

- Office Administrative Procedures
- Telecommunications 1
- Records and File Architecture
- Office Systems Management
- Communications 3
- General Studies

Requirements: Completion of subjects in previous 3 semesters (or permission of Program Coordinator)

Semester 5

- Elements Salary & Benefits Admin.
- Organizational Management 1
- Marketing 1
- Telecommunications 2
- Micro Economics
- Business elective

Requirements: Completion of subjects in previous 5 semesters (or permission of Program Coordinator)

Semester 6

- Labour Relations
- Organizational Management 2
- Personnel Management & Development
- Management by Communication
- Macro Economics
- Business elective

Word Processing Supervisor Program

North Campus

Four semesters beginning September and January.

Word Processing has changed the role of the secretary. It has altered and increased the responsibilities of employees by demanding business procedures which will bring about greater office productivity.

This program enables the student to become proficient in the use of office equipment. The student will learn the need for a feasibility study which will include setting objectives and the selection of appropriate equipment.

Admission Requirements

- Ontario Secondary School Graduation Diploma or equivalent
- grade 12 English
- minimum keyboarding speed of 40 gwpm (30 nwpm) is required to enter the first semester. There is no direct entry to second semester.

Job Opportunities

The graduating student can choose one of several office careers. Initially, experience as a word processor or correspondence secretary will enable the graduate to become a valuable member of an information team. The student showing potential will find excellent opportunities for advancement.

Graduation Requirements

Keyboarding: 60 gwpm (50 nwpm minimum) (within 3 errors). An overall average of 60% in final year (minimum requirement to graduate).

Curriculum

Requirements: Keyboarding 40 gwpm (30 nwpm minimum) Shorthand: Nil

Semester 1

- Simulated Office Environment 1
- Word Processing and Concepts 1
- Elements of Accounting
- Introductory Communications
- General Studies

Requirements: Keyboarding 50 gwpm (40 nwpm minimum) (within 4 errors)

Semester 2

- Simulated Office Environment 2
- Office Systems
- Office Communications Networks 1
- Business Mathematics
- Communications 1
- General Studies

Requirements: Keyboarding 50 gwpm (40 nwpm minimum) (within 3 errors)

Semester 3

- Elements of Systems
- Office Communications Networks 2
- MathPac/AlphaSort
- Personnel
- Communications 2
- General Studies

Requirements: Keyboarding 55 gwpm (45 nwpm minimum) (within 3 errors)

Semester 4

- Office Administration Procedures
- Telecommunications 1
- Records & File Architecture
- Office Systems Management
- Communications 3
- General Studies

Keelesdale Campus

beginning any Monday

The Keelesdale campus of Humber College offers students interested in pursuing Commercial subjects a unique opportunity.

Subjects are offered in 12 week modules, 2 hours per day, 5 days per week. (It is expected you will complete the work in 12 weeks, although some students may require more time, others less).

The approach allows you, depending on your own commitments, to attend classes in the morning, in the afternoon, or all day.

The subjects are divided into 3 Pathways (Accounting, Secretarial and General). It is possible to select from any Pathway, although some subjects do have prerequisites.

Admission Requirements

Applicants must be at least 19 years old

Two years of Ontario Secondary School education (with credits in both math and English) or the equivalent

Placement testing is available

Curriculum

General Pathway

- Office Procedures
- Intro. to Business
- Computer Literacy
- Keyboarding
- Elements of Financial Recording

Accounting Pathway

- Automated Accounting
- Accounting 2

Secretarial Pathway

- Word Processing
- Typing 2
- Dicta Typing

300 Health Sciences and Human Services

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Ambulance and Emergency Care

North Campus

Three Semesters Starting September

You will learn more than how to safely transport the sick and injured in this program. You will acquire the knowledge, skills and competence to provide basic emergency care and reduce situational hazards to patients. The program consists of courses in theoretical and clinical aspects of emergency patient care, with supporting courses in biology and social sciences. In the third semester, you will get clinical experience in selected hospitals and ambulance services.

Graduates receive an Ambulance and Emergency Care certificate and are eligible for certification as an Emergency Medical Care Assistant in Ontario.

Admission Requirements

- Ontario Secondary School Graduation Diploma or equivalent
- Senior level biology and chemistry
- pre-admission questionnaire to be returned to us (deadline specified by Registrar)
- information-sharing session at the College (date given by Registrar)
- recommended age: 19 years minimum by end of December of first year at the College (required for provincial licensing)
- secondary school science comprehension questionnaire and English pretest
- health certificate
- valid driver's license (class G)

Curriculum

		Credits
Semester 1	**(26 hours/week)**	
	Ambulance Maintenance, Operation & Safety	1
	Ambulance Service 1	2
	Human Anatomy and Physiology, Intro.	4
	Community Health (under revision)	2
	Emergency Patient Care 1	7
	Emergency Patient Care Lab 1	1
	Communications 1	4
	First Aid & Accident Prevention	1
	Human Relations	4
Semester 2	**(26 hours/week)**	
	Ambulance Service 2	3
	Emergency Patient Care 2	6
	Emergency Patient Care Lab 2	5
	Moral and Ethical Issues in Health	2
	Physical Education	2
	Psychology	3
	Rescue Procedures	2
	Microbiology	1
	Emergency Patient Care Seminar	2
Semester 3	**(40 hours/week for 6 weeks)**	
	Applications in Emergency Patient Care	15

Job Opportunities

The Ontario Ambulance Act requires the successful completion of this program before you can gain full-time employment in the ambulance system in Ontario.

You can work as technical assistants or as ambulance officers in ambulance services, in hospital emergency departments and in some health and medical centres that use ambulances.

Later you could advance to management positions in ambulance services, become a training officer (Ministry of Health) or a community college teacher, get into sales for emergency medical equipment companies, or write for emergency-oriented publications.

Additional Costs

- $250 for uniforms and $300 for books

Profile of a Good Student

- industrious, committed, self-disciplined, articulate
- comfortable in chemistry and biology
- relates well with peers and patients
- can work well alone but is flexible enough for team work

Child Care Worker Program

Lakeshore Campus

Six Semesters Beginning September

(also available on a part-time basis)

This program is for emotionally mature people who can easily form relationships and who are eager to grow both professionally and personally. The program prepares the student to work competently with disturbed children and adolescents (4 to 18 years old) and their families.

Disturbed children have behavioural and emotional difficulties that affect their ability to function in school, at home or in their community. This may result in their involvement with Children's Aid Societies, special education or residential treatment centres, psychiatric hospitals, group homes, family service agencies and correctional services. It is in these places that Child Care Workers put their skills into practice.

Admission Requirements

- Ontario Secondary School Diploma with 4 credits in grade 12 English
- minimum age of 18 years, because most employers select graduates who are least 21.
- interview with faculty to assess personal suitability
- approximately 80 hours of volunteer experience with children (not baby-sitting) in a treatment agency, as summer camp counsellor, etc.

Job Opportunities

Graduates from our program have found employment in a number of different areas: including Children's Aid Society group homes, in residential and outpatient services of mental health facilities, in observation and detention facilities. We have been satisfied with the very high percentage of our students who

Curriculum

Semester 1	**(24 hours/week)**	**Credits**
	Human Growth & Development 1	4
	Behavioural Foundation 1	3
	Introduction to Professional Skills	2
	Theory & Practice of Therapeutic Activities 1	3
	Community Services	2
	Communications	4
	General Studies (2)	6
Semester 2	**(28 hours/week)**	
	Integrative Seminar 1	2
	Human Growth & Development 2	4
	Behavioural Foundations 2	3
	Theory & Practice of Therapeutic Activities 2	3
	Communications	4
	Field Work	12
Semester 3	**(27 hours/week)**	
	Assessment, Planning & Recording	2
	Psychopathology of Childhood 1	3
	Family Dynamics 1	2
	Child Care Work Methodology 1	4
	Field Work 2	12
	Integrative Seminar 2	1
	Group Theory 1	2
Semester 4	**(27 hours/week)**	
	Family Dynamics 2	2
	Child Care Work Methodology 2	4
	Integrative Seminar 3	1
	Field Work 3	12
	Group Theory 2	2
	Psychopathology of Childhood 2	3
	General Studies	3
Semester 5	**(27 hours/week)**	
	Integrative Seminar 4	1
	Field Work 4	18
	Interviewing & Counselling Skills 1	2
	Treatment Philosophies 1	2
	Family Intervention 1	2
	Community Intervention	2

are hired in their field after graduation. Many of our graduates move into supervisory positions after two or three years. Others develop their skills so that they can effectively work with families, groups or as consultants to teachers.

From the second semester till the end of this program, you will complete 1472 hours of field placement. You should budget travel expenses for these placements which will be in Metro Toronto. Supplies will cost you close to $300.00 per semester.

Semester 6	(28 hours/week)	
	Integrative Seminar 5	1
	Field Work 5	18
	Interviewing & Counselling Skills 2	2
	Treatment Philosophies 2	2
	Family Intervention 2	2
	Human Sexuality	3

Community Worker Program

Lakeshore Campus

Four semesters beginning September (also available on a part-time basis)

Are you interested in helping people to help themselves?

Community Development is the process by which people in various communities organize themselves to identify and obtain satisfaction of their special needs. A Community Worker assists communities in this process, for example by bringing together single parents in a low-income area to set up an activity centre for themselves and their preschool children, or by helping immigrant families gain full access to social, community and educational services.

The two-year Community Worker Program will provide you with the knowledge and skills necessary to be a competent community worker and offers the opportunity to acquire experience in community settings. You will learn how to organize and lead groups, how to identify and train community leaders, and how to problem-solve in groups.

You will be encouraged to develop self-confidence, assertiveness and awareness of people from different social and ethnic backgrounds. You will improve your speaking, written and media communications skills.

Admission Requirements

- Ontario Secondary School Graduation Diploma (with grade 12 English)
- mature people who can demonstrate that they function at least grade 12 level

Job Opportunities

Our graduates have found that their field placements have given them valuable experience and provided them with contacts in the field. Jobs exist in the outreach programs of both government and non-government social and community services, with community-sponsored housing developments, ethnic and immigrant aid organizations, community information centres, home support services for the elderly, self-help organizations of the handicapped, youth work projects, store-front legal clinics, women's services, special government-funded projects in the community, as well as in a variety of other related community settings.

A community worker needs initiative and the ability to work and act independently both to find and develop jobs in the community, as well as to do the job itself. Working to help communities help themselves can be a demanding job - but not just a job – it can also be personally satisfying and rewarding. Because you will often work for small non-profit organizations, you should not expect high salaries.

The single most important element of the community worker program is field placement. For hours a week in the 2nd, rd and 4th semesters, you will work in the community with a variety of agencies and community organizations.

These field experiences will be evaluated by staff and by field supervisors so that you will become as effective as possible in community settings over the two years of the program. In each semester, an integrative seminar provides the opportunity to integrate course work with actual experience in the field. By sharing and analyzing these experiences with other students and program staff, you will acquire the knowledge and skills to be an effective community worker.

Curriculum

Semester 1	(22 hours/week)	Credits
	Lifespan Development	3
	Psychology: Understanding Human Behaviour	3
	Urban Sociology	3
	Introduction to Human Service Methods	3
	Interpersonal Skills	3
	Human Services Seminar	3
	Communications	4
Semester 2	**(27 hours/week)**	
	The Political Process	3
	Community Work Practice	3
	Integrative Seminar (CW)	1
	Field Training	14
	Counselling & Group Work Skills	3
	General Studies	3
Semester 3	**(28 hours/week)**	
	Politics of Social Services	3
	Research Techniques	3
	Field Training 3	14
	Integrative Seminar 3 (CW)	1
	Communications	4
	General Studies	3
Semester 4	**(25 hours/week)**	
	Planning & Eval. Methods	3
	Community Development	3
	Community Law (CW)	2
	Field Training 4	14
	Integrative Seminar 4 (CW)	1
	Job Search Module	1
	Agency Administration Methods	1

Developmental Services Worker (Mental Retardation Counsellor)

Lakeshore Campus

Four semesters beginning September

(also available on a part-time basis)

This program will train you to work with developmentally handicapped people of all ages and functioning levels. You will go through a four-week supervised orientation during the first semester. The two following semesters will give you field work experience in several disciplines and developmental remedial programs in the Metro Toronto community. Your fourth-semester internship will be in community settings and the larger mental retardation facilities. Over the two years of this program you will learn how to access community resource systems and facilitate personal development on an individual or group basis.

Admission Requirements

- Ontario Secondary School Graduation Diploma (with grade 12 English)
- good health as certified by a physician (OHIP personal or family coverage is essential)
- birth certificate
- pre-admission interview
- working experience with the developmentally handicapped

Job Opportunities

Upon graduation you can work in protective services, family care, group home and apartment residential care, in counselling within a provincial facility, in Adult and Educational Training Centres, on projects involving children, young adults and mature people. Some jobs may involve shift work. With a few years of experience you will become supervisor or even director depending on the size of the organization which employs you. In some positions, you may have to take on training responsibilities.

Curriculum

		Credits
Semester 1	(24 hours/week)	
	Human Growth & Development 1	3
	Behavior Pathology 1	3
	Intro to Mental Retardation 1	3
	First Aid	1
	Field Practice 1	3
	Individual Program Planning	2
	Environmental Studies 1	3
	Communications 1	4
	Applied Methods 1	2
Semester 2	(27 hours/week)	
	Human Growth & Dev. 2	3
	Field Practice 2	6
	Intro to Mental Retardation 2	3
	Counselling Tech. 1 (MRC)	2
	Child Abuse M.R.C.	1
	Behaviour Pathology 2	3
	Functional Exceptionalities	2
	Communications 2	4
	General Studies	3
Semester 3	(25 hours/week)	
	Field Practice 3	6
	Applied Methods 2	2
	Environmental Studies 2	4
	Counselling Tech. 2 (MRC)	3
	Sexuality & The Mentally Handicapped	2
	Special Needs in Mental Retardation	3
	Behaviour Management	3
	Sign Language for Mental Retardation	1
	Preventive Health in M.R.	1

Semester 4	(Internship 5 mos. 40 hrs/week)	
	NOTE: During this internship the student will do one of the following:	
	a) Rotate every 4 weeks through modular units, or	
	b) Follow DACUM approach with rotation based on age and functional level.	
	Modules:	
	Residential Unit:	5
	Developmental Education	5
	Multi-Handicapped Module	5
	Family Care Module	5
	Vocational-Rehabilitation Mod.	5

A successful graduate has a keen interest in the multiple facets of development of a person. Rather than being dismayed at any delay or deficiency found, the graduate would see an opportunity to assess and prioritize the needs and assist the individual to develop toward a productive, fulfilling and independent lifestyle with the given potential each person possesses.

Additional Costs

- Textbooks for the program will cost $200 to $300 and you will need a video tape cassette. Living and travel expenses during field placement should also be included in your budget.

Early Childhood Education

North Campus

Four Semesters Starting September

The Early Childhood Education Program provides students with the knowledge and techniques/ skills necessary for working with the preschool child. Emphasis is placed on total child development and the guidance of the child toward becoming self-reliant and emotionally stable. By learning how to provide a warm, nurturing yet stimulating environment, graduates should be able to foster mental health, growth and development in each child. Communication skills and inter-personal relationships between children, parents and adults in general are an essential focus in this program.

Current population problems, such as public housing, high rise urban and suburban developments, and growing economic needs have increased public awareness of the importance of the early childhood years in establishing good social, emotional and play patterns.

We are currently witnessing major change in services for children with special needs. Infant services and regular day care programs are beginning to accept that all children, to an extent, have special needs. Exposure to all children is a focus for this program.

During the first two semesters, students will have field placements with children in day care centres and nursery schools, and block placements in the Humber Day Care and the Humber Child Developmental Centre. In the third and fourth semesters, field placement will be either a specialized setting for preschool children, a junior or senior kindergarten and/ or day care. The block placements in the lab/demonstration schools at Humber College will be repeated.

Curriculum

		Credits
Semester 1	**(27 hours/week)**	
	Teaching the Young Child 1	4
	Creative Activities Workshop 1	3
	Child Observation	2
	Field Practice 1	6
	Integrative Seminar 1	1
	Nutrition & Health	1
	The Child with Special Needs 1	2
	Psychology of Infancy & Early Childhood 1	4
	Communications 1	4
Semester 2	**(28 hours/week)**	
	Teaching the Young Child 2	4
	Creative Activities Workshop 2	3
	Field Practice 2	6
	Integrative Seminar 2	1
	The Abused Child	1
	The Child with Special Needs 2	2
	Psychology of Infancy & Early Childhood 2	4
	Communications 2	4
	General Studies	3
Semester 3	**(27 hours/week)**	
	Psychology Later Childhood 1	3
	Community Resources 1	2
	Field Practice 3	10
	Integrative Seminar 3	1
	Child in the Family	3
	The Child with Special Needs 3	2
	Individual Program Planning	1
	Elective	3
	Extended Care Programming	2

Semester 4	(26 hours/week)	
	Psychology Later Childhood 2	3
	Administrative Procedures	2
	Field Practice 4	10
	Integrative Seminar 4	1
	Parent-Teacher Relationships	3
	Comparative Studies in Early Childhood	2
	The Child with Special Needs 4	2
	General Studies	3

Admission Requirements

Ontario Secondary School Graduation Diploma
Personal health review and immunization record, certified by a qualified physician. No chronic limitations that would prevent effective supervision of children.
Written proof of experience with preschool children in a structured setting (day care, nursery school, parent co-op). Age range should be birth to 6 years. Experience does not include babysitting and the 80 hours minimum should be completed prior to February 15th and be recent in nature.
Pre-admission testing
Pre-admission questionnaire
Pre-admission orientation session
Upon acceptance into the program, students will be required to complete on their own accord a basic standardized first aid certificate and a basic cardiopulmonary resuscitation course (Heart Saver level). This must be completed prior to admittance in the program. Documentation must be submitted.

Interests and Skills

- realistic attitude and an understanding of frustrations involved
- awareness of own identity and strengths
- outside interests and activities
- personal flexibility, emotional maturity and stability
- good communication skills

Job Opportunities

After graduation, students may complete two years of practical training at a recognized preschool nursery and qualify for certification by the Association for Early Childhood Education.

Graduates work in day nurseries, day care centres, nursery schools, community housing facilities, hospitals and some treatment centres for young children with special needs. The Early Childhood Education program is gaining increased recognition in a variety of agencies and institutions.

With the growth of day care in the province, graduates who have started as classroom teachers have been able to become supervisors or owners of their own centres.

Expected Workload

The workload is very heavy and you can expect a minimum thirty (30) assignments per semester. The overall field work hours are approximately one thousand. To succeed in this program, students must be able to speak/write fluently.

Additional Costs

- Textbooks $275/year
- Travel to field placements $100/year
- Expendable supplies $150/year

Early Childhood Education For the Developmentally Handicapped

North Campus

Four semesters, plus one field placement split into two May/June block experiences (six weeks each) starting September

In this program you will learn the techniques and skills needed to provide an educational program for people with developmental special needs, from birth to early adult years. Major emphasis is placed on younger persons with developmental special needs in educational programs (birth to 10 years of age). As infant services, regular day care and nursery school programs are beginning to accept that all children, with or without developmental problems, have special needs; exposure to a wide range of children is a focus for this program.

During the first two semesters, students will have field placements with non-handicapped children in day care centres and nursery schools. Students are also expected to take on a volunteer placement with children with developmental special needs, in addition to block placements in the Humber Day Care and Humber Child Development Centre. In the third and fourth semesters, field placement will be in nursery schools for specific types of handicapping conditions and developmental classes in the school system. Some students may be placed in specialized settings such as Infant Stimulation Projects, Adult Developmental Programs or agencies serving specific handicapping conditions.

The 5th semester, or work semester, is broken down into May and June periods at the end of each year. The first period will be spent with children with developmental special needs in settings acceptable to the program coordinator and the Early Childhood Education Certification Board. The second period will be spent with

Curriculum

		Credits
Semester 1	**(30 hours/week)**	
	Teaching the Young Child 1	4
	Creative Activites Workshop 1	3
	Child Observation	2
	Field Work 1	6
	Integrative Seminar 1	1
	Nutrition & Health	1
	The Child with Special Needs 1	2
	Seminar on the Child with Special Needs 1	1
	Elements of Human Behaviour 1	3
	Human Growth & Development 1	3
	Communications 1	4
Semester 2	**(30 hours/week)**	
	Teaching the Young Child 2	4
	Creative Activities Workshop 2	3
	Field Work 2	6
	Integrative Seminar 2	1
	The Abused Child	1
	The Child with Special Needs 2	2
	Seminar on the Child with Special Needs 2	1
	Human Growth & Development 2	3
	Normalization within the Community	2
	Communications 2	4
	Elements of Human Behaviour 2	3
Semester 3	**(22 hours/week)**	
	Developmental Activities 1	2
	Program Planning and Administration 1	3
	Field Work 3	6
	Integrative Seminar 3	1
	Teacher-Parent Involvement	3
	The Child with Special Needs 3	2
	Seminar on the Child with Special Needs 3	2
	General Studies	3

Semester 4	(26 hours/week)	Credits
	Developmental Activities 2	2
	Program Planning and Administration 2	4
	Field Work 4	6
	Integrative Seminar 4	1
	Curriculum Planning Resources	3
	The Child with Special Needs 4	2
	Seminar on the Child with Special Needs 4	2
	General Studies	3
	Family Dynamics	3
Semester 5	(24 hours/week)	
	Field Work 5	24

non-handicapped children in settings acceptable to the program coordinator. Students will not be paid for these two six-week periods, and will be charged a fee to cover supervision.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- personal health review and immunization record as certified by a qualified physician. No chronic limitations that would prevent effective supervision of children
- written proof of experience in a structured setting with children who have developmental special needs. Age range should be birth to 10 years, preferably with preschool children. Further exposure to preschool children who do not have a handicapping condition in a day nurseries setting is an additional asset. Experience does not include babysitting, should be educational in focus; the 80 hours minimum should be completed prior to February 15th and be recent in nature.
- pre-admission testing
- pre-admission questionnaire
- pre-admission orientation session

Upon acceptance into the program, students will be required to complete on their own accord a basic standardized first aid certificate and a basic cardiopulmonary resuscitation course (Heart Saver level). This must be completed prior to admittance in the program. Documentation must be submitted.

Interests and Skills

- realistic attitude and an understanding of the frustrations involved
- outside interests and activities
- awareness of own identity and strengths
- emotional maturity and stability
- good communication skills

Job Opportunities

After graduation, students may complete two years of practical training at a recognized preschool and qualify for certification by the Association for Early Childhood Education. Students graduating from this program will be equipped to work in day nurseries, day care centres, nursery schools, community housing facilities, hospitals and treatment centres for young children with special needs. With some experience, graduates have become supervisors, infant stimulation project workers, have started their own business in age-appropriate equipment and toys, and may qualify as Resource Teachers in integrated day nurseries as defined in the proposed Standards and Guidelines for staff qualification in the Day Nurseries Act.

Expected Workload

The workload is very heavy and you can expect a minimum of thirty (30) assignments per semester. The overall field work hours are approximately twelve hundred. To succeed in this program, students must be able to speak/write English fluently.

Additional Costs

- Textbooks $300/year
- Travel to field placements $150/year
- Expendable supplies $150/year
- Field work semester fee $59/year

Funeral Service Education

North Campus

Four semesters starting September

In this program you will encounter every aspect, both practical and theoretical, of funeral service. As part of the Health Sciences Division, the program stresses the important therapeutic function which the funeral service has for the living. Behavioural science courses are designed to help you meet the needs of those who are to be served in a funeral service. A business management course has been included so that you will gain a more acute understanding of the inherent problems that exist in the operation of any business. You will accumulate the necessary practical experience through use of the Humber College facilities and cooperating funeral homes.

If you are considering this program, you should have a strong desire to be helpful to people and the basic compassion and tolerance to carry out this desire with people of all socio-cultural backgrounds. You should also have the potential for excellent communications skills.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- pre-admission interview and testing
- health certificate (health history and Physician's statement of health)
- applicant must be eligible for a Class G Driver's Licence
- applicant must provide proof of a minimum of 30 hours observation or work experience in a funeral home

Job Opportunities

In your work you will have to assist clients in coping with grief, arrange and coordinate whatever social and/or religious practices they desire, and aid them in various legal, social, and emotional problems.

You will also have to care for the deceased, guard against the spread of disease and work with a variety of human service professions. Therefore you must become skilled in embalming and restoration and familiar with all relevant statutes.

Although Humber College will help by arranging interviews, you will have to find employment for the third and fourth semesters. To be licensed in Ontario, third and fourth semesters field placement must be in Ontario.

Curriculum

		Credits
Semester 1	**(26 hours/week)**	
	Human Anatomy and Physiology, Intro	4
	Community Health	2
	Embalming Lab 1	2
	Embalming Theory 1	3
	Communications for Health Sciences	4
	First Aid & Accident Prevention	1
	General Studies	3
	Microbiology	1
	Moral & Ethical Issues In Health	2
	Orientation to Funeral Service 1	4
Semester 2	**(27 hours/week)**	
	Cell Physiology	1
	Embalming Lab 2	2
	Embalming Theory 2	4
	Keyboarding	2
	Orientation to Funeral Service 2	4
	Pathology	3
	Psychology of Grief	4
	Restorative Art	3
	Small Business Mgmt.	4
Semester 3		
	Theoretical Applications 1 (Correspondence Course)	4
Semester 4		
	Theoretical Applications 2 (Correspondence Course)	4
Spring Session		
	Theoretical Applications 3 (On Campus)	3

Year 1 at North Campus, Year 2 at Osler Campus

Five full semesters and two spring sessions

(within 24 months)

The nursing program at Humber prepares the motivated student to help clients and their families stay well, adapt to conditions of illness and cope with the dying process. Through specific courses in the humanities, students acquire knowledge about the individual, the family and community, examining the influences on behaviour through lifestyle, growth and development. Throughout the program, the legal and moral issues encountered in nursing practice are discussed. The problem-solving skills of the nursing process are developed in the clinical settings (Paediatrics, Obstetrics, Medicine, Surgery, Psychiatry, Rehabilitation) under the supervision of the clinical instructor until the student demonstrates confidence in nursing judgement and decision-making. Upon successful completion of the Program, students are eligible to write the Registration Examinations through the College of Nurses of Ontario.

Admission Requirements

- Ontario Secondary School Graduation Diploma or equivalent with two different senior level sciences at 60%, i.e., Grade 11 or 12 sciences (chemistry, physics or biology in grades 11, 12 or 13) and a 60% average in all academic subjects taken in the last year of study
- or mature applicant status (19 years old at the time of enrolment)
- pre-admission testing (fee $20)
- pre-admission questionnaire
- personal health review by a physician
- immunization record
- cardiopulmonary resuscitation certificate (CPR), first aid certificate

Curriculum

Semester 1	**(29 hours/week)**	**Credits**
	Microbiology (Nursing)	1
	Assessment of the Well Individual	6
	Basic Nursing Practice	8
	Developmental Psychology	3
	Introductory Sociology	3
	Communications for Health Sciences	4
	Basic Anatomy and Physiology (Nursing)	4
Semester 2	**(29 hours/week)**	
	Introduction to Adaptation Nursing 1	8
	The Nurse as Practitioner 1	14
	Physiological Adaptation and Maladaptation 1	4
	General Studies	3
	Summer Session 1 (26 hours/week for 8 weeks)	
	Adaptation Nursing 2	5
	The Nurse as Practitioner 2	7
	Physiological Adaptation and Maladaptation 2	2
Semester 3	**(25 hours/week)**	
	Adaptation Nursing 3	6
	The Nurse as Practitioner	14
	Physiological Adaptation and Maladaptation 3	2
	General Studies	3
Semester 4	**(26 hours/week)**	
	Adaptation Nursing 4	6
	The Nurse as Practitioner 4	18
	Physiological Adaptation and Maladaptation 4	2
	Summer Session 2 (27 hours/week for 8 weeks)	
	Leadership in Nursing	3
	The Nurse as Leader	11
Semester 5	**(37.5 hours/week)**	
	Pregraduate theory	2
	Pregraduate Experience	35

- In-coming Registered Nursing Assistants must show proof of current registration with the College of Nurses of Ontario in order to be eligible for exemptions in some nursing courses of the first semester.

Interests and Skills

- The candidate should enjoy meeting and working with people of all ages should be in good physical and mental health. Volunteer experience in hospitals can be helpful in adjusting to the hospital setting. Ability to problem solve and good reading and writing skills are an asset.

Job Opportunities

Graduates will be eligible to write the Registered Nurse's Examination of Ontario offered through the College of Nurses. Positions exist with acute and chronic-care hospitals, voluntary community health agencies, homes for the elderly, industry and doctor's offices.

Additional Costs

- The following expenses are in addition to tuition fees. The cost of textbooks is approximately $450. Students are required to purchase Humber College uniforms, shoes, stockings, caps, etc.: the total cost is approximately $100-$130.

Field Placement

All major acute and chronic care agencies, primarily in the cities of York and Etobicoke.

Residence Accommodation

Accommodation for female students who may elect to live in residence for part or all of their program is available at the Osler Campus, (5 Queenslea Avenue, Weston, Ontario). Since there are only a limited number of spaces, application for residence should be as early as possible. Further information is available upon request. (Telephone (416) 249-8301).

Profile of a Good Student

A successful student maintains a 60% minimum average. An ability to research information independently combined with good problem-solving skills are definite assets. A genuine interest in nursing as a career coupled with realistic personal expectations facilitate the socialization process into the profession. An ability to interact with people of all ages enables the student to establish the expected therapeutic relationship with clients in the clinical setting.

North Campus

Two semesters and six weeks in the spring

The role of the Nursing Assistant is to be an integral part of the nursing team, working mainly at the bedside with patients in long-term and acute-care settings. However, there are opportunities for the Nursing Assistant to take a leadership role in nursing homes. Our thirty-six week course features a common first semester with the nursing students, preparing them in the basic skills of nursing practice. Emphasis throughout the program is placed on increasing competence in the theory and practice of nursing. Clinical experience is obtained in both acute and long-term care settings. Supporting courses in the biological and human sciences are also taken.

Admission Requirements

Ontario Secondary School Diploma or equivalent or mature applicant status
Pre-admission questionnaire
Pre-admission testing (Fee $20)
Personal health record
CPR certificate (cardiopulmonary resuscitation)
First aid certificate

Interests and Skills

The candidate should enjoy meeting and working with people of all ages and should be in good physical and mental health. Volunteer experience in hospitals can be helpful in adjusting to the hospital setting. Ability to problem solve and good reading and writing skills are an asset.

Job Opportunities

Graduates are eligible to write the Nursing Assistant Registration Examination through the College of Nurses of Ontario. Employment opportunities include acute and chronic-care hospitals, nursing homes, community health agencies and doctor's offices.

Curriculum

Semester 1	(29 hours/week)	Credits
	Basic Anatomy and Physiology (Nursing)	4
	Microbiology (Nursing)	1
	Developmental Psychology	3
	Introductory Sociology	3
	Communications for Health Sciences	4
	Assessment of the Well Individual	6
	Basic Nursing Practice	8
Semester 2	**(30 hours/week)**	
	Adaptation Nursing (N.A.)	7
	The Nursing Assistant as Practitioner	21
	Legal and Professional Issues in Nursing (N.A.)	1
	Ethical Issues in Health Care	1
	Summer Session (37.5 hours/week for 6 weeks)	
	Pre-graduate experience (N.A.)	12

Additional Costs

- The following expenses are in addition to tuition fees. The cost of textbooks is approximately $300. Students are required to purchase Humber College uniforms. The total expenditure for uniforms, shoes, stockings, caps, etc. is approximately $100-$300.

Field Placement

All major acute and chronic-care agencies, primarily in the cities of York, North York and Etobicoke.

Residence Accommodation

Accommodation for female students for part or all of their program is available at the Osler Campus (5 Queenslea Avenue, Weston, Ontario). Since there are only a limited number of spaces, application for residence should be as early as possible. Further information is available upon request. (Telephone (416) 249-8301).

Profile of a Good Student

A successful student in the Nursing Assistant Program maintains grades above 60% in each subject throughout the program. An above-average student does extra reading in content areas and does preparatory reading prior to classes. This student has a good ability to solve problems and uses this in the clinical setting applying classroom knowledge to practice.

A keen interest in people is evident in the student's ability to develop positive relationships with classmates, teachers and patients.

Pharmacy Assistant Program

North Campus

Two semesters starting September

The Health Sciences Division has developed this program in cooperation with the Ontario College of Pharmacists, to train technical personnel to assist registered pharmacists in both community and hospital practice in the province of Ontario.

In addition to purely vocational subjects, you will develop skills in communications and business methods such as retailing and typing. In a five-week period, you will gain on-the-job practical experience in a community and a hospital pharmacy.

Admission Requirements

- Ontario Secondary School Graduation Diploma with good grades in mathematics and chemistry, plus one other science at Grade 11 or 12 level
- pre-admission testing
- pre-admission interview & orientation to the program
- health certificate (health history and physician's statement of heath)

Interests and Skills

- strong sense of responsibility
- clear and effective communication with customers, patients and colleagues is important
- initiative within the limits of the job
- ability to work quickly without sacrificing accuracy and neatness

Curriculum

		Credits
Semester 1		
	Business Elective	4
	Communications for Health Sciences	4
	Orientation to Pharmacy	4
	Community Pharmacy Prescriptions	4
	Pharmaceutical Calculations 1	1
	Pharmacy Science 1	4
	Keyboarding (Intermediate)	4
Semester 2		
	Community Health	2
	Introductory Human Physiology	4
	Microbiology	1
	Pharmacy Science 2	5
	Aseptic Techniques	2
	Hospital Pharmacy Procedures	1
	Hospital Pharmacy Dispensing	3
	Computer Prescription Records	2
	First Aid & Accident Prevention	1
	Hospital Pharmacy Work Experience	3
	Community Pharmacy Work Experience	2

Job Opportunities

Qualified pharmacy assistants work in community and hospital pharmacies or clinics. Duties may involve dispensing, pricing, inventory control, typing, records maintenance, some cash register work and operation of computer terminals. You should expect to work some shifts, or in the evenings. With some experience, job opportunities expand to pharmaceutical industry and sometimes research laboratories.

Rehabilitation Worker Program

Lakeshore Campus

Four semesters beginning September, or January

(available on a part-time basis as well).

The field of rehabilitation needs frontline personnel to assist vocationally-handicapped adults improve their physical, mental, social and professional condition. This program has been developed in cooperation with professional rehabilitation personnel who work in agencies and associations of the public and private sectors. The program structure supports the integration of special needs persons into work opportunities suited to their goals, functional level and labour-market conditions.

Admission Requirements

Ontario Secondary School Graduation Diploma
Grade 12 English
Ability to work with people with special needs must be shown through an employment or volunteer work history
Endorsement through letters of reference from rehabilitation professionals is desirable.

Job Opportunities

Graduates work in the vocational rehabilitation or employment services systems, in residential program services, in special needs education and in the insurance industry. We try to match your field placement to your entry-level employment goal. In many cases, graduates have been hired where they did their field work.

In a career path study made in 1983, two paths emerged among graduates who remained in the rehabilitation field. Some graduates attended university either full-time or part-time to upgrade skills. These graduates then entered clinical and administrative positions in municipal and provincial government and private agencies.

Curriculum

Semester 1	(25 hours/week)	Credits
	Lifespan Development	3
	Psychology 1	3
	Sociology 1	3
	Introductory Methods	3
	Interpersonal Skills	3
	Human Services Seminar	3
	Communications 1	4
	General Studies	3
Semester 2	**(25 hours/week)**	
	Programming (R.W.)	4
	Basic Work Skills 1 (R.W.)	2
	Structure & Function (R.W.)	5
	Field Practicum 1	7
	Communications 2	4
	Ergonomics 1	3
Semester 3	**(27 hours/week)**	
	Assessment and Evaluation	3
	Field Work 2 (R.W.)	14
	Placement Services	3
	Application of Rehabilitation Process	4
	General Studies	3
Semester 4	**(27 hours/week)**	
	Ergonomics 2	3
	Administrative Management	3
	Field Work 4 (Rehab)	14
	Field Practicum 2	6

Other graduates obtained work rapidly and progressed through the ranks to positions as supervisors or coordinators of programs for residential or vocational services.

Additional Costs

- Text costs are approximately $200 per semester. Supplies cost approximately $75. Transportation costs may vary with field placements. Students will need clothing which is appropriate to field placement sites and to campus activities. Special trips or projects occur during the year which provide valuable learning experiences. Costs for the special activities vary but we estimate $150 will meet these needs.

Field Placement

Various agencies throughout Metro Toronto provide learning opportunities for program students.

Social Service Worker

HUMAN SERVICES

Lakeshore Campus

Four semesters beginning September

(part-time schedule available)

The program prepares you to assist individuals who are experiencing social problems because their basic needs have not been adequately satisfied. You learn about human behaviour and development and how circumstances can alter or stop satisfactory growth. You will acquire helping skills to help individuals obtain the resources they need or enable them to improve their coping and problem-solving abilities. Remedies may include financial aid, counselling and teaching life skills. Field work in a social service organization two days a week (semester two, three, four) provide an opportunity to practice skills and methods of helping through case management, group work or community outreach. Students may be involved in work with children or senior citizens, with the physically ill or disabled, with situations of financial need, emotional or mental health problems, or in the field of correctional services.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- grade 12 English
- volunteer work experience with a social service organization (50 hours minimum)
- interview with faculty members

Interests and Skills

- capacity to develop self-awareness, maturity
- tolerance of individual and group differences
- strength under stress and ability to meet deadlines
- good communication skills, both written and oral

Curriculum

		Credits
Semester 1	**(25 hours/week)**	
	Lifespan Development	3
	Psychology 1	3
	Sociology 1	3
	Introductory Methods	3
	Interpersonal Skills	3
	Human Services Seminar	3
	Communications 1	4
	General Studies	3
Semester 2	**(25 hours/week)**	
	Social Service Methods 1	4
	Human Growth & Behaviour	2
	Field Practice 1 (S.S.W.)	14
	Integrative Seminar 1	1
	Communications 2	4
Semester 3	**(24 hours/week)**	
	Social Service Methods 2	4
	Administration & Organization	3
	Field Practice 2 (SSW)	14
	Integrative Seminar 2	1
	Abnormal Psychology 1	2
Semester 4	**(26 hours/week)**	
	Social Services Methods 3	3
	Field Practice 3 (SWW)	14
	Integrative Sem. 3	1
	Abnormal Psychology 2	2
	Family Life Education 1	3
	General Studies	3

Job Opportunities

Graduates have found jobs in provincial and municipal social services, correctional services community work, services to the aged, mental health programs and residential settings.

Additional Costs

- Students should budget $150.00 per semester for supplies and are responsible for transportation costs to their field placement (in Metro Toronto).

Advanced Studies in Early Childhood Education

North Campus

This post-diploma program enhances the knowledge and skills used with children. These courses are challenging and are taught by professionals with extensive experience and special skills. Six courses must be completed to obtain the certificate.

Admission Requirements

Diploma in Early Childhood Education or equivalent

Interests and Skills

Commitment to personal growth through professional development
Willingness to meet academic challenge
Creativity and openness to new ideas and experiences

Job Opportunities

Prior to entry into this program, the student must be qualified to work in a preschool setting. She/he may be active in the field or may be pursuing other activities while gathering her/his professional development through these courses. A student who successfully completes this program may move into the position of assistant supervisor or supervisor of a preschool centre.

Curriculum

The student needs to complete any 6 of the course offerings in order to receive the certificate.

- After-school programming for 6-10 year olds
- Cognitive development: theory and practical applications in early childhood
- Developmentally appropriate activities
- Development of home programming
- Effective supervision and communication
- Infant-toddler programming
- Integration – community-based services
- Language development in young children
- Learning through movement
- Music and creative movement
- Parent-teacher relationships
- Techniques of individual programming

Early Childhood Education Resource Teacher Post Diploma Certificate

North Campus

Six 36-Hour Courses and three 105-hour field placements

This program is also offered on Saturdays.

Designed for graduates of an early childhood education program, the program will equip the educator with the theory and practical experience necessary to work with children who have special needs. The curriculum will focus on integration and on programming for individuals and groups. It includes demonstrations, discussions, lectures, reports, the use of resource materials and assignments.

Admission Requirements

- early childhood education diploma or equivalent
- one post diploma year of work with children in a group care setting
- 105 hours (minimum) with children who are developmentally delayed (as defined in the Day Nurseries Act)
- orientation session with program co-ordinator

Interests and Skills

- ability to work with children with special needs and their families in a sensitive, resourceful manner
- on-going career commitment
- leadership, initiative and understanding

Job Opportunities

After this program, graduates are qualified to work as resource teachers (as defined in the proposed Day Nurseries Act). You will work in day care settings where you can help each child and his/her family lead a more independent and productive life in the community.

Curriculum

Incoming students will have to review basic information selected for its relevance to the course content. The package is designed to apply the knowledge acquired in introductory courses to the material of higher-level courses.

Introduction to resource teaching
Individual developmental planning 1
Field Practicum 1
Working with families
Individual developmental planning 2
Field practicum 2
Advocacy in the school and community
Coordinating resources
Field practicum 3

Courses must be taken in this order. The workload is heavy and will demand consistent high quality effort.

North Campus

This is a post-diploma certificate program specifically designed for professionals working in the field of gerontology who wish to acquire additional professional training. The overall purpose of the program is to meet the learning needs of individuals working with the elderly in institutions and the community, in an effort to enhance the quality of life of the older adult. The program is offered on a part-time basis during all four semesters (fall, winter, spring, summer), one evening per week plus an occasional weekend and can be completed in two years.

Admission Requirements

Applicant will be interviewed and may be required to supply a letter of reference for admission to the program

Supervision of clinical practice for all students will be agreed upon mutually by Humber College and the institution involved

Curriculum

Compulsory:

	The Aging Process
	Dynamics of Communication with the Elderly and their families
	Health Care for the Aged
	The Elderly: Policies and Issues
	Independent Research Project
	Clinical/Field Experience
	Conferences/Workshops
	General Studies

Electives

	Leadership Skills
	Principles and Practices of Group Work
	Principles and Methods of Motivation and Reactivation
	Management Skills for Nurses
	Individual Field Experience

Human Sexuality: Counselling & Teaching Program

North Campus

This post-diploma multidisciplinary certificate program is specifically designed for, and restricted to, professionals (e.g. family physicians, social workers, psychologists, counsellors, teachers, nurses, clergy, and others engaged in teaching or counselling people in the area of human sexuality) who feel they require additional professional training.

The program is offered on a part-time basis during the fall and winter semesters with special workshops on some selected weekends. In addition to the regularly scheduled classes and workshops, there are field placements in local institutions, agencies and clinics, to broaden the professionals current range of educational, clinical, and teaching experiences.

Admission Requirements

- professional certification or the equivalent of professional experience is required
- interview and letters of references are required before entry into the program can be guaranteed

Curriculum

Students may only register for the entire program rather than one course at a time (only Medical-Biological Aspects of Sexuality can be taken for credit on an individual basis).

Orientation to Human Sexuality
Medical-Biological Aspects of Sexuality
Sexual Attitudes and Values
Psycho-Social Aspects of Sexuality
Counselling in Family Planning & Sexuality
Teaching Family Planning & Sexuality
Clinical/Field Experience Practicum

Life Threatening Illness, Dying and Bereavement

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Multidisciplinary

This post-diploma certificate program for professionals who are currently employed in a related human service field requires at least one year of current working experience in a related field.

The program is offered on a part-time basis during the fall, winter and spring semester, one evening per week plus an occasional weekend. The program can be completed in one year and offers supervised practical experience.

Admission Requirements

Applicant will be interviewed must supply a letter of reference for admission to the program

- students employed in a clinical or institutional setting will be required to provide permission from the institution to engage in the practicum on site

Curriculum

Death in Our Society
Life Threatening Illness
Helping the Critically Ill and Their Families
Field Placement 1
Death, Grief and Bereavement
Helping the Bereaved
Field Placement 2

- supervision of clinical practice for all students will be agreed upon jointly by Humber College and that institution. Clinical placements will be provided for all other students, limited to the availability of supervisors

Post-Diploma Nursing Programs

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Humber College offers registered nurses and nursing assistants a wide selection of carefully designed post-diploma programs to add to their basic training.

Our Refresher Program for registered nurses can prepare the returning nurse for work in either the acute-care medical-surgical setting or the long-term care. This program is offered part-time days over a 13-week period.

For further information on these post-diploma nursing programs, please contact Gail Summers, Senior Program Coordinator, Osler Campus, 249-8301, ext. 216. We publish a detailed brochure on all our nursing programs. It includes the schedule for a full year.

Nine programs are available for nurses with at least one year of experience. These are:

R.N. Operating Room Nursing
Contemporary Obstetric Nursing
Coronary Care Nursing
Emergency Nursing
Mental Health Nursing
Neurological Nursing
Occupational Health Nursing
Respiratory Nursing
RNA Operating Room Nursing

400 Hospitality

hospitality programs

Culinary Management (Chef de Partie) Diploma Program

North Campus

Four semesters beginning May, July, September and January

In this program you will receive basic and advanced theory and practical experience in professional food preparation and management control of food operations. Emphasis is placed on knowledge of foods, economy in food preparation, food sanitation and personal hygiene, control of quality and quantity of prepared food, portion control, planning and supervising food production enterprises, operational accounting, food and labour cost control, and production safety.

The aim of the Culinary Management Program is to prepare students who aspire to become cooks and chefs—who seek growth as Chefs de Partie, Sous Chefs and Chefs de Cuisine.

Admission Requirements

- Ontario Secondary School Graduation Diploma or mature student status
- good health (medical certificate and chest x-ray)
- orientation session at the College

Interests and Skills

- You must be interested in a service-oriented career.
- You must have good human relations skills, be able to work in teams, have good health and stamina, be willing to work hard and long hours, and have a desire to serve people.
- You should possess good leadership talents.
- You must be prepared to accept rigid discipline, particularly as it relates to safety, sanitation and personal hygiene, and dress code in all classes.

Curriculum

		Credits
Semester 1	**(31 hours/ week)**	
	Baking 1	4
	Small Quantity Food 1	4
	Large Quantity Food 1	6
	Kitchen Management 1	3
	Food Theory 1	3
	Hotel Butchery 1*	4
	Communications 1	4
	General Studies	3
Semester 2	**(27 hours/ week)**	
	Baking 2	4
	Small Quantity Food 2	4
	Large Quantity Food 2	6
	Kitchen Management 2	3
	Food Theory 2	3
	Communications 2	4
	Language d'Hospitalite + +	3
Semester 3	**(24 hours/ week)**	
	Baking 3	4
	Food Prep. Buffet 1	5
	Adv. Intern. Cuisine 1	6
	Kitchen Management 3	3
	Food Theory 3	3
	Hotel Butchery 2*	4
	General Studies	3

Semester 4	(25 hours/week)	Credits
	Baking 4	4
	Food Prep. Buffet 2	5
	Adv. Intern. Cuisine 2	6
	Kitchen Management 4	3
	Food Theory 4	3
	General Studies	3

*Indicates that subject may be taken in either Semester 1 or 3
++Indicates that subject is not a substitution for elective

Job Opportunities

As the industry expands the demand for well-trained, creative cooks and chefs, knowledgeable not only in the preparation of fine International, French and Canadian Cuisines, but also proficient in menu planning, purchasing, supervision of kitchen staff, increases.

When you graduate from the Culinary Management (Chef de Partie) program career opportunities abound for you in Toronto, Ontario, across the country, and abroad. In Ontario alone, the Hospitality Industry absorbs 16,000 new employees each year. And this number is increasing.

Profile of a Good Student

- Professional Recognition: a) Upon completion of two semesters (one academic year) of the Basic Culinary Training program you will have qualified for the in-college portion of the Ontario Provincial Apprenticeship program for cooks. b) Upon successful completion of the Culinary Management Diploma Program and two years (4000 industry hours), you will be qualified to write the Certificate of Qualification examinations set by the Ontario Ministry of Manpower for certification of Journeyman Cooks.

Hotel and Restaurant Management Diploma Program

North Campus

Four semesters beginning May, July, September and January

Diploma/Certificate study is available during evenings/ weekends.

In the Hotel and Restaurant Management Program you receive a balanced training in both theoretical and practical aspects of hospitality, preparing you for professional growth in your chosen career area. The program provides you with training in professional, managerial and hospitality business subjects; at the same time, attention is given to communications skills, Hospitality Law, marketing, personnel training, supervision of food and beverage operations, financial control and computer operations.

To obtain the necessary culinary skills, you will learn basic and advanced theory of foods, and receive extensive practical training in food preparation. This training embraces French, International and Canadian cuisines.

The Humber Room, a new, 100-seat restaurant/classroom, provides you with hands-on experience in Dining room service, bar operations, and food and beverage Remanco computerized control.

The aim of the Hotel and Restaurant Management Program is to prepare men and women for junior management and supervisory positions within the industry, positions from which they can grow, specializing in such areas as hotel, restaurant, motel, club and resort management, catering and related segments of the industry.

Curriculum

Semester 1	**(25/27 hours/week)**	**Credit**
	Hotel Front Office & Housekeeping Operation	4
	Intro. to Hospitality	3
	Practical Baking*	4
	Bar Management Theory*	2
	Mixology*	2
	Quantity Food Management - Theory 1	2
	Quantity Food Management - Practical 1	4
	Hospitality Law*	4
	Food & Beverage Service Practical*	6
	Food & Beverage Service Theory*	2
	Basic Finance Operation*	4
	Communications 1	4
	Language d'Hospitalite++	3
Semester 2	**(25/27 Hours/week)**	
	Practical Baking*	4
	Bar Management Theory*	2
	Mixology*	2
	Hospitality Law*	4
	Food & Beverage Service Practical*	6
	Food & Beverage Theory*	2
	Basic Finance Operation*	4
	Quantity Food Management - Theory 2	2
	Quantity Food Management - Practical 2	4
	Communications 2	4
	General Studies	3
Semester 3	**(25/27 hours/week)**	
	International Gastronomy**	3
	Food & Beverage Service Practical 2**	3
	Hospitality Marketing**	4
	Purchasing for Hospitality Industry	3
	Management Techniques for Hospitality Industry	3
	Advanced Finance Operation	4
	Hospitality Computer Operations**	4

	Security for the Hospitality Industry	4
	General Studies	3
Semester 4	(25/27 hours/week)	
	International Gastronomy**	3
	Food & Beverage Service Practical 2*	3
	Hospitality Marketing**	4
	Hospitality Computer Applications**	4
	Food, Beverage and Labour Cost Control	4
	Menu Planning	3
	Personnel in the Hospitality Industry	4
	General Studies (2)	6
	Advanced Language Subject	3

*Indicates that subject may be taken in either Semester 1 or 2
**indicates that subject may be taken in either Semester 3 or 4
++Indicates that these subjects are not substitutions for electives

Admission Requirements

Ontario Secondary School Graduation Diploma or mature student status
good health (include medical certificate and chest x-ray result)
for mature students, an interview is required, for other students it is strongly recommended

Interests and Skills

- You must be interested in a service-oriented career.
- You must like people, possess determination, be willing to work hard, have good health, have good human relations skills.
- You should possess good leadership talent.
- You must be prepared to accept rigid discipline, particularly as it relates to safety, sanitation and personal hygiene, and dress code in all classes.

Job Opportunities

When you graduate from the Hotel and Restaurant Management Program career opportunities abound for you in Toronto, Ontario, across the country, and abroad. In Ontario alone, the Hospitality Industry absorbs 16,000 new employees each year. And this number is increasing!

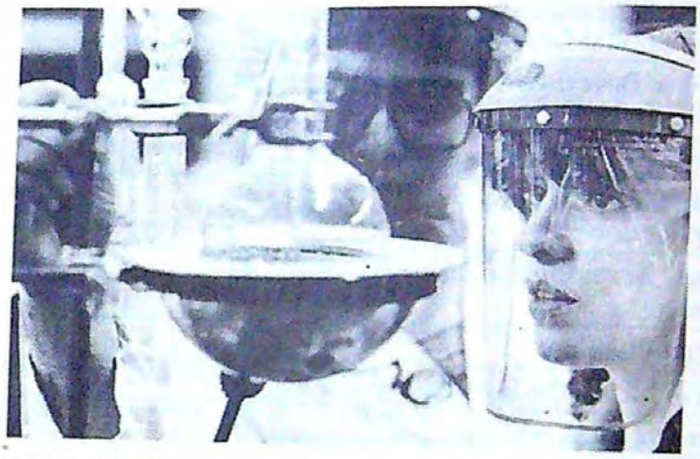
Here, at Humber College, the Career Planning and Placement Department can assist you in obtaining employment. This Department, along with the Hospitality Division, organizes on-campus interviews with representatives of major hotels, restaurants, chains, catering companies, clubs and resorts. In the past 17 years, our students have gained wide recognition from the Canadian Hospitality Industry for their dedication, knowledge and professional attitude. There is always a strong demand for graduates of Humber's Hotel and Restaurant Management Program—and we're proud of the fact!

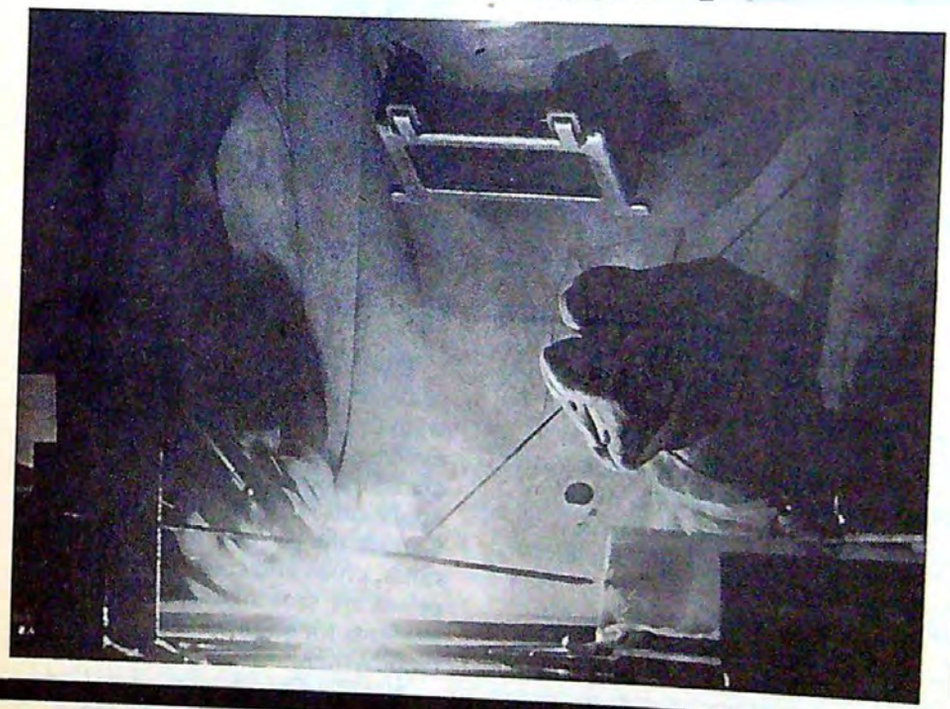
Upon completion of the first two semesters of study, should you wish to get a head start in gaining experience, you will find that there are more opportunities than applicants. In Ontario and across Canada the resorts, hotels, restaurants, clubs and catering enterprises are seeking out Humber students for summer and full-time employment.

NOTE: Canada's immigration laws do not permit international students who enter Canada for study to work in Canada.

Graduation Requirements

- Compulsory attendance at classes and labs is expected. There is a rigid dress code, both in class and when working in The Humber Room and Food Labs. Costs over and above tuition reach $220 per semester including the cost of textbooks, equipment, uniforms, etc.





500 Technology

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547 welder fitter

Architectural Design Technician

North Campus

Four semesters beginning September

As an Architectural Design Technician you would work under the supervision of an Architect or an Architectural Technologist to produce complete sets of working drawings. These drawings would include floor plans, sections, elevations and details of a variety of buildings complying with local and national building codes. You would also be able to specify the quality of materials and workmanship required for these buildings and report on the job progress of their construction. Students may be required to put refundable deposits on model shop equipment supplied by the College.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- grade 12 English, technical or academic mathematics
- minimum of 2 credits in any combination of senior level science and program related senior level technical courses (drafting and physics at the senior level are strongly recommended)

Job Opportunities

As a graduate Architectural Technician you may find employment as an architectural draftsperson, building inspector, or as a sales representative for construction materials and equipment. As a graduate of this four-semester program you may also be eligible to enter into the fifth semester of Architectural Design Technology. Successful completion of fifth and sixth semesters will allow you to graduate as an Architectural Design Technologist.

Curriculum

See semesters 1, 2, 3 and 4 of the technologist training on 502.

Architectural Design Technologist

North Campus

Six semesters beginning September

Architectural Technology is a six-semester program with the first four semesters the same as the Architectural Technician program. During the fifth and sixth semesters you will complete tasks which are more complex in nature and more demanding in accuracy. As a technologist you will be able to produce complete presentation drawings including interior and exterior perspectives, complete working drawings, as well as make detailed estimates and specifications of construction materials and report of job progress. As a technologist you will be able to produce a conceptual layout of a given subdivision showing the general location of streets, houses, schools, etc. Students may be required to put refundable deposits on model shop equipment supplied by the College.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- grade 12 English, technical or academic mathematics
- minimum of 2 credits in any combination of senior level science and program related senior level technical courses (drafting and physics at the senior level are strongly recommended)
- in order to continue into third year of the Architectural Technology program, students must meet the requirements for the Architectural Design Technician Diploma with a minimum grade point average of 75% (70% with permission).

Curriculum

Semester 1	**(25 hours/week)**	**Credits**
	Arch. Design Dftg. 1	4
	Arch. Detailing 1	2
	Arch. Graphics	3
	Mat. & Meth. of Const. 1	2
	Physics (Heat, Light, Sound)	3
	Communications 1	4
	General Studies	3
	Mathematics 1	3
	Building Codes & Regulations	1
Semester 2	**(25 hours/week)**	
	Arch. Design Dftg. 2	4
	Arch. Detailing 2	2
	Mat. & Meth. of Const. 2	2
	Statics (Arch.)	3
	Build. Environ. Syst. 1	2
	Introduction to Computing	2
	Communications 2	4
	General Studies	3
	Mathematics 2	3
Semester 3	**(25 hours/week)**	
	Arch. Design Dftg. 3	4
	Arch. Detailing 3	2
	Rendering Techniques 1	2
	Structural Dftg.	3
	Surveying	3
	Strength of Materials 1	3
	Mat. & Meth. of Const. 3	2
	Mathematics 3	3
	General Studies	3
Semester 4	**(25 hours/week)**	
	Arch. Design Dftg. 4	6
	Strength of Materials 2	3
	Modern Arch. History & Design 1	2
	Intro. to Arch. CADD Syst	3
	Electrical Dftg.	3
	Model Making 1	2
	Construction Mgmt. & Estim.	4
	Specification Writing	2

Semester 5	(25 hours/week)	Credits
	Arch. Design Dftg. 5	8
	Rendering Techniques 2	2
	Arch. & Economic Anal.	3
	Model Making 2	2
	Town Planning	2
	Build. Environ. Syst. 2	3
	Intro. to Struc. Design	3
	Introduction to Inter. Des.	2
Semester 6	**(25 hours/week)**	
	Arch. Design Dftg. 6	8
	Arch. Conserv. & Restoration	3
	Modern Arch. History & Design 2	2
	Arch. CADD Studio	4
	Development Law	2
	Intro. to Landscape Architecture	2
	Technical Report	1
	Build. Environ. Syst. 3	3

Job Opportunities

As an Architectural Technologist your career opportunities will cover such fields as job captain, draftsperson, coordinator, estimator, or a variety of related positions in the construction field.

503

Construction Administration (Architectural) Technologist*

North

Six semesters beginning September

General

In order to respond to the need for highly-qualified construction management personnel, this option has been structured to provide the Architectural Technologist graduate with a thorough understanding and working knowledge of the principles, practices and conventions used by construction management personnel in the execution of their functions.

Admission Requirements

- Architectural Technician Diploma or equivalent

Job Opportunities

As a graduate technologist in this program you can expect to find employment with construction contractors and construction engineering firms. You will be capable of assuming the following job functions at the junior level: quantity survey and estimating, quality control, drafting, project inspection, job coordination, project supervision and construction sales etc.

Curriculum

for first four semesters see 502

Semester	See Architectural Design Technologist on page 502 for first four semesters.	
Semester 5	**(26 hours/week)**	**Credit**
	Adv. Arch. Drafting	8
	Construction Admin. 1	3
	Arch. & Economic Analysis	3
	Quantity Survey & Est. 1	4
	Bldg. Environ. Systems 2	3
	Intro. to Structural Des.	3
	Town Planning	2
Semester 6	**(24 hours/week)**	
	Construction Admin. 2	3
	Construction Contract Admin.	3
	Cost Control & Analysis	3
	Bldg. Environ. Syst. 3	3
	Arch. Conserv. & Rest.	3
	Quantity Surv. & Est. 2	4
	Development Law	2
	Business Develop. Mgmt.	3

*This program is an option of the Architectural Design Technologist program.

Civil Engineering Technician

504

North Campus

Four semesters beginning September

This program provides a comprehensive background in the principles, practices and conventions of Civil Engineering Technology. You will receive instruction in: engineering communications, professional ethics and behavior, established design procedures, drawing preparation and interpretation, construction specification writing and interpretation, construction material testing and site inspection, construction management and estimating, surveying and layout. As a graduate you will be capable of becoming an important member of the civil design or construction team responsible for the design, planning, construction and maintenance of bridges, dams, airports, highways, railways, commercial and industrial buildings of all types, water purification plants and wastewater systems and treatment plants.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- grade 12 English, grade 12 technical or academic mathematics and at least 2 credits in any combination of senior level science and program-related technical courses
- drafting and physics at senior level are strongly recommended

Job Opportunities

As a graduate, you can expect to find openings in the building design and construction firms, in municipal services and transportation systems. Other positions are junior draftsperson, junior designer, quality control technician, estimator and project inspector. Should you wish to further your education, you may be eligible to enter directly into the third year of the Civil Engineering Technologist Program.

Curriculum

Semesters 1, 2, 3 and 4 are outlined on 505.

Civil Engineering Technologist

505

North Campus

Six semesters beginning September

Civil Engineering Technology is a six-semester program with the first four semesters the same as the Civil Engineering Technician Program. The 5th and 6th semesters enable you to carry out more complex and challenging tasks. These include design calculations

Curriculum

Semester 1	(25 hours/week)	Credits
	Mathematics 1	3
	Mechanics	4
	Construction & Tech. Dwg.	3
	Survey 1	5
	Const. & Bldg. Materials 1	3
	Communications 1	4
	General Studies	3

and preparation and interpretation of drawings, related to subdivisions, streets, roads, and highways. These drawings include wood, steel, concrete, soil structures. Students may be required to put refundable deposits on survey equipment.

Admission Requirements

- Ontario Secondary School Graduation Diploma.
- Additional requirements are 4 credits in English, 4 credits in technical or academic mathematics and a minimum of 2 credits in any combination of senior level science and program related senior level technical courses
- drafting and physics at the senior level are strongly recommended
- in order to continue into third year of the Civil Engineering Technology program, students must meet the requirements for the Civil Technician Diploma with a minimum grade point average of 75% (70% with permission).

Job Opportunities

As a Civil Technologist you will have a variety of options. These alternatives include civil technologist, design technologist, civil draftsperson, construction supervisor, quality control inspector, and project cost estimator. Job responsibilities may include design, detailing and drafting, structural analysis and design, research and technical sales.

Semester 2	(25 hours/week)	Credits
	Mathematics 2	3
	Statics	4
	Structural Drafting	3
	Computer Programming 1	3
	Survey 2	5
	Communications 2	4
	General Studies	3
Semester 3	**(25 hours/week)**	
	Calculus 1	3
	Basic Strengths of Mat.	4
	Fluid Mechanics 1	3
	Civil Dwg.	3
	Highway Technology	6
	Computer Programming 2	3
	General Studies	3
Semester 4	**(25 hours/week)**	
	Calculus 2	3
	Adv. Stren. of Materials	4
	Soil Mechanics	4
	Municipal Services 1	4
	Const. & Bldg. Materials 2	3
	Air-photo Interpretation	3
	Site Mgmt. Technology 1	3
	Technical Report	1
Semester 5	**(25 hours/week)**	
	Highway Design	4
	Theory of Structures	6
	Foundations	6
	Fluid Mechanics 2	4
	Municipal Services 2	3
	Environmental Geology	2
Semester 6	**(25 hours/week)**	
	Structural Design & Drawing	8
	Sanitary Technology	4
	Specifications	2
	Estimating	2
	Site Management 2	3
	Technical Project	2
	Transportation Planning	4

Civil Engineering (Explosives) Technician

North Campus

Four semesters beginning September

As an Explosives Technician you will be trained in the safe and efficient use of explosives. You will be trained in the basic skills of loading blast holes, setting charges, checking circuits and safety firing blasts. You will also be able to design and plan the charge drilling layout, select the explosive, interpret test blasts, estimate drilling and blast costs, supervise drilling and powder handling, and take all the necessary legal, seismic and safety precautions involved in blasting. Students may be required to put refundable deposits on survey equipment.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- grade 12 English
- grade 12 technical or academic mathematics
- minimum 2 credits in any combination of senior level science and program related senior level technical courses (chemistry and physics at the senior level are strongly recommended)

Job Opportunities

As an Explosives Technician you may find employment in construction industrial quarries, open pit and underground mines, seismographic control and exploration, technical sales, and troubleshooting. Additional opportunities include site inspector, exploration, specification writer and estimator.

Field Trip

The students in the two-year Civil Explosives Program will have the opportunity of attending three field trips. The only cost to the student will be for transportation and living costs, which will be approximately $200-250/trip. Students who not wish to attend or those who for financial reasons will not be able attend, must complete a comprehensive written assignment instead.

Curriculum

Semester 1	**(25 hours/week)**	**Credits**
	Mathematics 1	3
	Mechanics	4
	Construction & Tech. Dwg.	3
	Survey 1 (Civil)	5
	Const. & Bldg. Materials 1	3
	Communications 1	4
	General Studies	3
Semester 2	**(25 hours/week)**	
	Mathematics 2	3
	Statics	4
	Structural Drafting	3
	Computer Programming 1	3
	Survey 2	5
	Communications 2	4
	General Studies	3
Semester 3	**(25 hours/week)**	
	Fluid Mechanics 1	3
	Rock Mechanics	2
	Elec. Cir. & Applic. 1	3
	Chemistry of Explos. 1	3
	Highway Technology	6
	Explosives Technology 1	5
	General Studies	3
Semester 4	**(25 hours/week)**	
	Vibration Studies	3
	Chemistry of Explos. 2	3
	Drilling Technology	3
	Explosives Technology 2	5
	Explosives Technology 3	5
	Site Mgmt. Tech. 1	3
	Specifications & Cost Anal.	2
	Technical Report	1

Construction Administration (Civil) Technologist*

North Campus

Six semesters beginning September

General

In order to respond to the need for highly-qualified construction management personnel, this option has been structured to provide the Civil Technology Graduate with a thorough understanding and working knowledge of the principles, practices and conventions used by construction management personnel in the execution of their functions.

Admission Requirements

- Civil Technician Diploma or equivalent

Job Opportunities

As a graduate technologist in this program you can expect to find employment with construction contractors and construction engineering firms. You will be capable of assuming the following job functions at the junior level: quantity survey and estimating, quality control, drafting, project inspection, job coordination, project supervision and construction sales.

Curriculum

		Credits
Semester 5	**(26 hours/week)**	
	Construction Admin. 1	3
	Theory of Structures	6
	Foundations	6
	Fluid Mechanics 2	4
	Municipal Systems 2	3
	Quantity Surv. & Est. 1	4
Semester 6	**(25 hours/week)**	
	Construction Admin. 2	3
	Construction Contract Admin.	3
	Cost Control & Analysis	3
	Quantity Surv. & Est. 2	4
	Development Law	2
	Business Dev. Mgmt.	3
	Sanitary Technology	4
	Eng. & Economic Analysis 1	3

*This program is an option of the Civil Engineering Technologist program (505).

Aerial Survey Technician

orth Campus

hree semesters beginning eptember

You will learn to operate most pes of stereo plotting instruments erial mapping. By overlapping erial photographs on special ewing equipment you will oduce a three-dimensional view compile maps showing roads, ildings, streams and contours of e land.

Note: Students may be required put refundable deposits on afting and survey equipment plied by the College.

dmission Requirements

tario Secondary School Gradua- n Diploma
ade 12 English, grade 12 techni- or academic mathematics d a minimum of 2 credits in any mb ination of senior level science d program related technical urses
ysics at the senior level is rongly recommended

ob Opportunities

As an Aerial Survey Technician u may find employment in an erial mapping company or with a ovincial or federal ency. Career alternatives include rtie r Operator or Draftsperson.

Curriculum

Semester 1	(26 hours/week)	Credits
	Photogrammetry 1	3
	Photogrammetry 2	3
	Environmental Geology	2
	Surveying 1	6
	Communications 1	4
	Mathematics 1	3
	Survey Drawing 1	2
	Physics (Heat, Light & Sound)	3
Semester 2	**(24 hours/week)**	
	Advanced Photogrammetry	4
	Cartography	3
	Surveying 2	6
	Survey Drawing 2	2
	Air Photo Interpretation	3
	Communications 2	4
	Computer Programming 1	3
Semester 3	**(10 hours/week)**	
	Practical Photogrammetry	10

(This is a concentrated, five-week, 6 to 7 hrs/day, course commencing at the end of the Winter Semester).

Hydrographic Survey Technologist

North Campus

Six semesters beginning September

Canada, a maritime nation, is bounded on three sides by one of the longest coastlines in the world. On the fourth side are the Great Lakes. These coastlines are becoming increasingly important to Canada for navigational purposes, as a fisheries resource, for off-shore exploration, and as a relatively unpolluted ecological paradise.

Mapping and surveying these waters are the prime responsibility of the Canadian Hydrographic Service. They must chart and map water depths, currents, underwater obstructions and obtain data on the marine life in these waters. This program has been developed in liaison with the Canadian Hydrographic Service as the first and only hydrographic training program in Canada. During the college portion of the program, you will learn basic skills which can be applied to land, coastline and water surveys. You will also specialize in marine and hydrographic techniques such as: position fixing by astronomical and electronic methods and various forms of radar, depth measurement using acoustic and sonar principles, as well as other forms of hydrographic data on water temperatures, currents, sea bed geology and marine life. You will become familiar with the basic principles of seamanship and navigation and learn the basics of marine and maritime law. During the summer, shipboard employment may be available through the Canadian Hydrographic Service as a practical extension of your college training program. Students may be required to put refundable deposits on drafting and survey equipment supplied by the College.

Curriculum

		Credits
Semester 1	**(25 hours/week)**	
	Mathematics 1	3
	Physics (Heat, Light & Sound)	3
	Elec. Cir. & Applic. 1	3
	Survey 1	6
	Survey Drawing 1	2
	Survey Camp 1 (Spring)	4
	Communications 1	4
Semester 2	**(24 hours/week)**	
	Mathematics 2	3
	Survey 2	6
	Survey Computations	3
	Survey Drawing 2	2
	Hydrographic Survey 1	3
	Computer Programming 1	3
	Communications 2	4
Semester 3	**(26 hours/week)**	
	Control & Elect. Surv. 1	5
	Advanced Survey 1	4
	Highway Technology	6
	Photogrammetry 1	3
	Environmental Geology	2
	General Studies	3
	Calculus 1	3
Semester 4	**(26 hours/week)**	
	Air Photo Interpretation	3
	Calculus 2	3
	Cont. & Elect. Survey 2	3
	Land Division	3
	Survey Law 1	2
	Computer Applications Lab 1	2
	Advanced Survey 2	2
	Astronomy	2
	General Studies (2)	6

Semester 5	(24 hours/week)	Credits
	Hydrographic Survey 2	4
	Oceanography & Meteorology	4
	Geodesy	6
	Computer Programming 2	3
	Tidal Studies	4
	Statistics	3
Semester 6	**(24 hours/week)**	
	Marine Law	2
	Navigation, Charts & Pilotage	4
	Adjustments of Observation	4
	Cartography	4
	Survey Camp 2	4
	Electronic Positioning Syst.	4
	Computer Applications Lab 2	2

Admission Requirements

Ontario Secondary School Graduation Diploma
Grade 12 English, and technical or academic mathematics
Minimum of 2 credits in any combination of senior level science and program related senior level technical courses (physics at the senior level is strongly recommended)

Job Opportunities

After graduation you may find employment in widely varied applications of hydrography and hydrography-related activities such as seismic surveys, offshore exploration and land survey for offshore operations. There is an increasing demand from survey engineering and consulting companies, offshore exploration companies and government departments such as public works, and ocean and acquatic sciences for hydrographic surveyors. Career alternatives in this field include party chief, surveyor (instrument person), field data processor draftsperson and in programming. In most of these jobs you may have to travel to remote locations.

Survey Technician

North Campus

Four semesters beginning September

Working under the direct supervision of a licensed land surveyor, the survey technician will be able to perform technical surveys and conduct the technical aspects of legal surveys, topographical surveys using conventional or electronic equipment, take celestial observations, prepare plans and perform computations related to all phases of survey operations. Depending on individual initiative, the survey technician could move into supervisory capacity as a party chief or supervisory survey related operations (supplies, transportation, safety etc.).

Note: Students may be required to put refundable deposits on drafting and survey equipment supplied by the College.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- grade 12 English, grade 12 technical or academic mathematics
- a minimum of 2 credits in any combination of senior level science and program related senior level technical courses
- Physics at the senior level is strongly recommended

Job Opportunities

Possible employers include private land surveyors, federal, provincial and municipal government agencies, construction companies and photogrammetric firms. Career opportunities exist in both outdoor and indoor conditions and include field positions such as chairman/woman, rodman/woman and instrumentman/woman. Office positions include draftsperson and field data processor.

As a graduate survey technician you may be eligible to enter directly into the 5th semester of the Survey Technology Program. Successful completion of the 5th and 6th semesters will allow you to graduate as a survey technologist.

Curriculum

See semesters 1, 2, 3 and 4 on 511

North Campus

Six semesters beginning September

Survey Technology shares the first four semesters with the survey technician program. The fifth and sixth semesters enable you to carry out more complex and challenging tasks such as: photogrammetry, cartography, geodetic control surveys, adjustment of observations and error analysis. The survey technologist will be able to supervise specialized field surveys, perform calculations for a plan of a subdivision, prepare the field layout of curves and spirals, use a computer program to adjust and analyse field observations, perform the title search, plan aerial mapping, and write technical reports on surveys conducted under their supervision. Note: students may be required to put refundable deposits on drafting and survey equipment supplied by the College.

Admission Requirements

Ontario Secondary School Graduation Diploma
Grade 12 English, grade 12 technical or academic mathematics and minimum of 2 credits in any combination of senior level science and program related senior level technical courses
Physics at the senior level is strongly recommended
Note: in order to continue into third year of the Survey Technology program, students must meet the requirements for the Survey Technician Diploma with a minimum grade point average of 55% (70% with permission).

Curriculum

Semester 1	(25 hours/week)	Credits
	Mathematics 1	3
	Physics (Heat, Light, Sound)	3
	Elect. Cir. & Applic. 1	3
	Survey 1	6
	Survey Drawing 1	2
	Survey Camp I (Spring)	4
	Communications 1	4
Semester 2	**(24 hours/week)**	
	Mathematics 2	3
	Survey 2	6
	Survey Computations	3
	Survey Drawing 2	2
	Hydrographic Survey 1	3
	Computer Programming 1	3
	Communications 2	4
Semester 3	**(26 hours/week)**	
	Calculus 1	3
	Control & Elect. Survey 1	5
	Advanced Survey 1	4
	Highway Technology	6
	Photogrammetry 1	3
	Environmental Geology	2
	General Studies	3
Semester 4	**(26 hours/week)**	
	Air Photo Interpretation	3
	Calculus 2 (Survey)	3
	Control & Elect. Survey 2	3
	Land Division	3
	Computer Applic. Lab 1	2
	Advanced Survey 2	2
	Astronomy	2
	Survey Law 1	2
	General Studies (2)	6

Job Opportunities

Possible employers include private land surveyors, federal, provincial and municipal government agencies, construction companies and photogrammetric firms. Career opportunities include both field and office positions. Field positions include party chief and surveyor. Office positions include draftsperson, title searcher, supervisor or office manager. Under the supervision of a surveyor your responsibilities may include laying out new property divisions and buildings, retracing old property boundaries, planning new subdivisions, and routing locations for highways, pipelines and utilities.

Semester 5	(25 hours/week)	Credits
	Geodesy	6
	Engineering Surveys	4
	Photogrammetry 2	3
	Survey Law 2	4
	Computer Programming 2	3
	Statistics	3
	Town Planning	2
Semester 6	**(23 hours/week)**	
	Adjustment of Observations	4
	Advanced Photogrammetry	4
	Legal Surveying	4
	Cartography	3
	Computer Application Lab 2	2
	Survey Camp 2	4
	Technical Project	2

CHEMICAL

Careers In Chemistry

As a graduate from one of Humber's four Chemistry programs, you are qualified to join a scientific team initially as a junior member with the possibility of moving to a supervisory position. Employment after graduation usually falls into one of the following four major areas:

Analytical or Quality Control Laboratories

Your main function as an analyst is to ensure that all materials purchased or sold by your company meet certain requirements. You may determine if an ore contains enough gold to make mining operations economically feasible, or you may monitor the sulphur dioxide content of the city air. You may analyse blood samples in a forensic lab. To accomplish tasks of this nature, you will find that you must be familiar with the operation of specialized instruments. Humber's laboratories are equipped with gas chromatographs, infra-red spectrophotometers, atomic absorption spectrophotometers, pH meters, refractometers and other equipment necessary for chemical analysis.

Technical Service and Sales

As a technical sales representative you will contact customers interested in the products your company manufactures. You may also occasionally trouble-shoot, service or set-up equipment purchased from your company. In some jobs you can get a company car and be called on to travel extensively.

Research and Development Laboratories

In a research laboratory you will take part in the development of new products or the improvement of established ones. You may assist in the development of 'everlasting razor blades', a deodorant that provides protection for a whole week, an antacid that absorbs 200 times its weight in excess stomach acid, a lead-free gasoline, a lubricating oil that eliminates oil changes and plastic bottles that will disintegrate in sunlight. The variety of projects you may be involved in is without limitation.

Pilot Plants and Production

Pilot plant experiments are experiments on a much larger scale than most development laboratory experiments. Pilot plant experiments usually involve working with up to several hundred pounds of materials.

If you are involved in production, you may operate a 'cat cracker' in an oil refinery, you may prepare and colour match several hundred gallons of paint, or you may be involved in the manufacture and packing of large quantities of measle vaccine. With your background from Humber College and additional experience, you can advance to a responsible position in this expanding field.

Chemical Laboratory Technician

North Campus

Four semesters starting September

A graduate of this program can analyse materials and products, synthesize basic organic compounds and prepare solutions. You will also be able to assemble and operate laboratory equipment, conduct routine tests, prepare graphs and report results in a wide variety of research and testing functions. You may have to place refundable deposits on lab manuals or other items supplied by the College.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- grade 12 English, grade 12 technical or academic mathematics and a minimum of 2 credits in any combination of senior level science and program-related senior level technical courses
- grade 11 or 12 physics and chemistry at least at the general level are strongly recommended

Job Opportunities

You can find work in quality-control testing and inspection, research, sales and service, pharmaceutical or public health laboratories, or perhaps in pollution control and measurements. As an alternative, you may continue for a third year in one of our chemical technology programs.

Curriculum

		Credits
Semester 1	**(24 hours/week)**	
	Mathematics 1	4
	Physics (Heat, Light & Sound)	4
	General Chemistry 1	4
	Bioscience	4
	Stoichiometry	4
	Communications 1	4
Semester 2	**(24 hours/week)**	
	Physics (Mechanics & Waves)	3
	General Chemistry 2	4
	Organic Chemistry 1 Lecture	2
	Organic Chemistry 1 Lab	4
	Introductory Microbiology	4
	Statistics	3
	Communications 2	4
Semester 3	**(26 hours/week)**	
	Organic Chemistry 2 Lecture	2
	Organic Chemistry 2 Lab	4
	Analytical Chemistry 1 Lecture	3
	Analytical Chemistry 1 Lab	4
	Methods of Microbiology	4
	Physical Chemistry	2
	Calculus 1	4
	General Studies	3
Semester 4	**(26 hours/week)**	
	Elec. Meas. for Chem. Systems	4
	Lab Instrumentation	4
	Lab Instrumentation Applications	4
	Environmental Microbiology	4
	Process Industries & Plant Safety	2
	General Studies (2)	6
	Analytical Chemical Applications	2

th Campus

semesters starting
ember

hnologist level
The first four semesters are the
e as those of the Chemical
oratory Technician program. In
third year, students will take
of these options: industrial,
robiology, engineering.
As a graduate of the six-semes-
Chemical Technologist pro-
Industrial option, you will
qualified to perform a variety of
ical tasks in a multitude of
stries. These tasks include the
ysis of industrial raw mate-
, the interpretation, calculation
reporting of the results, and
development of text procedures
further testing.
With the Microbiology option
will become skillful in prepar-
olutions and samples for
rumental analysis and micro-
e examinations, in analysing
industrial raw materials
finished products by using
ical, chemical, biological
strumental methods.
you choose the Engineering
on you will be prepared to
mble and operate laboratory
pilot-plant equipment used in
strial, analytical and manufac-
g operations. You will also
ble to handle safety problems
petroleum, mining, rubber,
c, glass, food or metallurgical
stries.

Curriculum

Semester 1, 2, 3 & 4 are the same as Chemical Laboratory Technician—see 512.

INDUSTRIAL Option

Semester 5	(26 hours/week)	Credits
	Calculus 2	3
	Analytical Chemistry 2 Lecture	4
	Analytical Chemistry 2 Lab	4
	Unit Operations 1	4
	Instrumentation for Chemical Processes	4
	Biochemistry Lecture	3
	Technical Report	1
	Computer Program. for Chem. Tech.	3

Semester 6	(24 hours/week)	Credit
	Chemical Thermodynamics & Kinetics	3
	Industrial Organic Chemistry	3
	Industrial Organic Chemistry Lab	4
	Unit Operations 2	4
	Biochemistry Lab	4
	Principles of Process Control	4
	Environmental Studies	

Admission Requirements

- Ontario Secondary School Graduation Diploma
- Grade 12 English, technical or academic mathematics and a minimum of 2 credits in any combination of senior level science and program-related senior level technical courses
- Grade 11 or 12 physics and chemistry, at least at the general level, are strongly recommended
- in order to continue into third year of Chemical Technology options, students must meet requirements for the Chemical Lab Technician Diploma with a minimum grade point average of 75%. (70% with permission).

Job Opportunities

You may find work as an operating member in testing and quality-control teams, technical sales, research, and, with experience, as an operating supervisor in chemical or processing industries. With a specialization in microbiology, you would get into food, pharmaceutical and chemical laboratories.

MICROBIOLOGY Option

Semester 5	(26 hours/week)	Credits
	Analytical Chemistry 2 Lecture	4
	Analytical Chemistry 2 Lab	4
	Industrial Microbiology	4
	Calculus 2	3
	Biochemistry Lecture	3
	Technical Report	1
	Microscopy & Photomicrography	4
	Comp. Program. for Chem. Tech.	3
Semester 6	**(24 hours/week)**	
	Biochemical Lab	4
	Industrial Organic Chemistry Lecture	3
	Industrial Organic Chemistry Lab	4
	Chemical Thermodynamics & Kinetics	3
	Food Microbiology	4
	Microbial Ecology	4
	Environmental Studies	2

ENGINEERING Option

Semester 5	(26 hours/week)	
	Calculus 2	3
	Instrumentation for Chemical Processes	4
	Chemical Engineering I	3
	Unit Operations I	4
	Computer Program. for Chem. Tech.	3
	Technical Report	1
	Analytical Chemistry 2 Lecture	4
	Analytical Chemistry 2 Lab	4
Semester 6	**(24 hours/week)**	
	Industrial Organic Chemistry Lecture	3
	Industrial Organic Chemistry Lab	4
	Unit Operations 2	4
	Chemical Thermodynaics & Kinetics	3
	Principles of Process Control	4
	Chemical Engineering 2	4
	Environmental Studies	2

Computer Engineering Technologist

th Campus

semesters starting tember

The graduate of this program have a strong software orienta- supplemented with an appro- amount of hardware tronics) experience. Upon uation, you will be able rform the following tasks:
structured analysis to specify, lop and test systems
ce well-structured and well- mented program modules problems through the appli- of appropriate computer guages
grate hardware and software ponents into complete systems operating system tools to solution of real-time problems erstand and apply different munications protocols used in buted computer systems.
ou may be required to purchase opriate electronic component and materials as recommended e College.

ission Requirements

rio Secondary School Gradua- Diploma
12 English, grade 12 techni- academic mathematics um 2 credits in any combina- senior level science and am related senior level ical courses. Computer sci- and physics courses are ly recommended.

Curriculum

Semester 1	**(26 hours/week)**	**Credit**
	Mathematics 1	4
	Communications 1	4
	Physics (Heat, Light, Sound)	3
	Electronic Circuits & Applications 1	4
	Logic 1	4
	Computers in Business	3
	Introduction to Pascal	4
Semester 2	**(25 hours/week)**	
	Mathematics 2	3
	Communications 2	4
	Physics (Mechanics & Waves)	3
	Electronic Circuits & Applications 2	4
	Logic 2	4
	Problem Solving with Pascal	3
	Circuits & Measurements	4
Semester 3	**(25 hours/week)**	
	Computer Architecture 1	4
	Numerical Methods 1	4
	Programming Languages	6
	Data Communications Systems 1	4
	General Studies	3
	Algorithms & Data Structures 1	4
Semester 4	**(25 hours/week)**	
	Computer Architecture 2	2
	Numerical Methods 2	4
	Systems Analysis	4
	Software Project 1	4
	General Studies	3
	Algorithms & Data Structures 2	4
	Assembler Programming	4

Job Opportunities

The graduate will work under the supervision of a computer systems engineer either individually or as part of a team. Employment opportunities exist in a wide range of industries that use embedded microcomputers or stand-alone computer systems. The industries will include process control, environmental control, automated warehousing, flexible manufacturing systems, telecommunications, local area networks and office automation.

Semester 5	**(25 hours/week)**	
	Operating Systems 1	4
	Real Time Systems	4
	Micro Processor Development Systems	4
	Data Communications Systems 2	4
	Peripherals	4
	Software Project 2	5
Semester 6	**(25 hours/week)**	
	Operating Systems 2	4
	General Studies	3
	Computer Applications	4
	Software Management	4
	Graphics Systems	4
	Software Project 3	6

Electrical (Control) Engineering Technician

Queensway A Campus

4-week program starting every week

The Electrical Industry is in constant need of technically trained personnel. The College is meeting this need by providing an educational program designed to provide a sound base for career development upon graduation. As a graduate of Humbers Electrical (Control) Engineering Technician program you will have received training in industrial and/or other applications of computer, electronics, instrumentation, electrical design, the generation and transmission of power, as well as the conceptual understanding, operation and control of electrical equipment and power systems.

The physics of circuit and equipment behaviour is emphasized enabling the graduate to be flexible in analysing unfamiliar situations and problems. The program content is designed to provide the graduate with a wide range of career opportunities with a high degree of job mobility and advancement potential as a technician.

Admission Requirements

Ontario Secondary School Graduation Diploma

Grade 12 English, grade 12 technical or academic mathematics and a minimum of 2 credits in senior level science and/or programming technical courses

Electricity or electronics and physics at the senior level are strongly recommended

Note: The students may be required to place refundable deposits on such items as lab manuals or other items supplied by the College.

Curriculum

Semester 1	(25 hours/week)	Credit
	Physics 1	3
	Mathematics 1	4
	Communications 1	4
	Computer Programming & Concepts	3
	Electrical Circuits & Applications 1	8
	General Studies	3
Semester 2	**(25 hours/week)**	
	Physics 2	3
	Mathematics 2	4
	Communications 2	4
	D.C. Equipment	7
	Electrical Circuits & Applications 2	4
	General Studies	3
Semester 3	**(25 hours/week)**	
	Electrical Design 1	3
	Mathematics 3	3
	A.C. Equipment 1	4
	Industrial Electronics 1	8
	Electrical Circuits & Applications 3	4
	General Studies	3
Semester 4	**(25 hours/week)**	
	Electrical Design 2	3
	Industrial Instrumentation	3
	A.C. Equipment 2	4
	Digital Circuits	4
	Industrial Electronics 2	4
	Control Systems	4
	Power Systems	3

Job Opportunities

Upon graduation, the Electrical (Control) Engineering Technician will be concerned with repair, calibration, maintenance or sales of electrical equipment. A technician will normally work under the guidance of a technologist or engineer. The Electrical (Control) Engineering Technician is required whenever electrical energy is used or generated.

Electronics Engineering Technician

North Campus

Four semesters starting September and January

This program is designed to provide you with a comprehensive background in modern electronic principles and with practical experience in modern, well-equipped laboratories. The practical experience gained in this program prepares you for employment in the computer, telecommunications, and industrial electronics industries. You may have to purchase electronics components kits and a recommended multimeter at the College.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- grade 12 English, grade 12 technical or academic mathematics and a minimum of 2 credits in any combination of senior level science and program related senior level technical courses
- electronics and physics at the senior level are strongly recommended

Job Opportunities

As an Electronics Engineering Technician you may find employment in a variety of industrial, engineering, and scientific organizations. You may become involved in equipment and component manufacturing, research and testing, equipment maintenance and repair, and electronic sales.

As a graduate of this four-semester program, with sufficiently high standing, you may further develop your expertise by entering the fifth semester of the Electronics Engineering Technology Program.

Curriculum

		Credit
Semester 1	**(26 hours/week)**	
	Mathematics 1	4
	Communications 1	4
	Physics (Heat, Light, & Sound)	3
	Elect. Circuits & Applications 1	4
	Logic 1	4
	Elect. Production Technology 1	4
	Basic Programming	3
Semester 2	**(26 hours/week)**	
	Mathematics 2	4
	Communications 2	4
	Physics (Mechanics & Waves)	3
	Elect. Circuits & Applications 2	4
	Circuits & Measurement	4
	Elect. Production Technology 2	3
	Logic 2	4
Semester 3	**(26 hours/week)**	
	Calculus 1	4
	Elect. Circuits & Applic. 3	4
	H.F. Circuits	4
	Microcomputer Systems 1	4
	Principles of T.V.	4
	General Studies (2)	6
Semester 4	**(25 hours/week)**	
	Electro-Mechanical Techniques	3
	Elect. Circuits & Applic. 4	4
	Microcomputer Systems 2	4
	Troubleshooting	4
	Telecommunication Systems	4
	Motors & Controls	3
	General Studies	3

Electronics Engineering Technologist

North Campus

Six semesters starting September and January

The first four semesters are the same as for the Electronics Engineering Technician program. The 5th and 6th semesters provide more advanced studies in the field of electronics. Emphasis is placed on advanced circuitry measurements, testing and troubleshooting of complex equipment, design and construction of prototypes, and the preparation of technical manuals and specifications for a wide variety of modern electronic systems.

You may be required to purchase electronics component kits and recommended test equipment at the College.

Admission Requirements

Ontario Secondary School Graduation Diploma

Grade 12 English, grade 12 technical or academic mathematics and a minimum of 2 credits in any combination of senior level science and program related senior level technical courses

Electronics and physics at the senior level are strongly recommended

Note: in order to continue into 3rd year of the Electronics Engineering Technology program students must meet the requirements for the Electronics Engineering Technician diploma with a minimum grade point average of 75% (70% with permission).

Curriculum

for first 4 semesters see 516

Semester 5	24 hours/week)	Credit
	Calculus 2	4
	Elec. Circuits & Appl. 5	4
	Opto-Electronics	4
	Video Systems	4
	Microcomputer Systems 3	4
	Techniques of Design	3
Semester 6	**(25 hours/week)**	
	Applied Statistics	3
	Elec. Circuits & Appl. 6	4
	Control Systems	4
	Data Communications	4
	Applied Electromagnetics	4
	Technical Project	2
	Microwave Techniques	4

Job Opportunities

As a graduate of the Electronic Technology program you may work in industries as varied as telecommunications, control equipment, computer systems, and industrial electronics systems.

As a technologist you can use your greater theoretical training in high technology areas such as fibre optics, microprocessor application and development, and electronic design techniques. You may also use your skills troubleshooting prototype equipment prior to manufacture.

Industrial Instrumentation Engineering Technician

Queensway A Campus

64 weeks starting every week.

Students proceed at their own pace and work with teachers on a one-to-one basis through individualized learning packages.

The Industrial Instrumentation Technician program will provide you with knowledge of up-to-date technology and the skills necessary to function in today's technical and automated industries. Some of the subjects in this program are:

mechanics, electronics, physics and chemistry. Graduates from this program will exhibit the ability to calibrate, troubleshoot, repair and maintain instruments and distributed control systems (such as the Honeywell TDC 2000) used for process measurement and control.

This program is a self-paced learning program and is also sponsored by Canada Employment and Immigration Commission (CEIC). For information on sponsorship please contact your local office.

Admission Requirements

- Ontario Secondary School Graduation Diploma.
- Additional requirements are grade 12 English, grade 12 technical or academic mathematics and a minimum of two credits in any combination of senior level science and program related senior level technical courses.

Job Opportunities

With industry becoming more automated every year, there is a demand for instrumentation technicians.

Graduates will find employment in fields such as manufacturing, pulp and paper, nuclear and hydro generating plants, mining, petro chemical, and natural gas, instrument manufacturing companies, plant construction, consulting firms, and service industries. Duties will involve calibration, repair and maintenance of various systems. Your training will enable you to choose other occupations relating to instrumentation such as, instrumentation technical salesperson, process operator, and control maintenance technician.

Curriculum

		Credit
Semester 1	**(25 hours/week)**	
	Physics 1	3
	Mathematics 1	4
	Communications 1	4
	Computer Programming & Concepts	3
	Electrical Circuits & Applications 1	8
	General Studies	3
Semester 2	**(27 hours/week)**	
	Physics 2	3
	Mathematics 2	4
	Communications 2	4
	Workshop Practices	2
	Measuring Instruments 1	5
	Electrical Circuits & Applications 2	4
	General Studies	3
Semester 3	**(26 hours/week)**	
	Mathematics 3	3
	Measuring Instruments 2	4
	Pneumatic Instruments	4
	Electronics 1	5
	Chemistry 1	2
	Automatic Controls 1	5
	General Studies	3
Semester 4	**(24 hours/week)**	
	Final Control Elements	3
	Chemistry 2	2
	Electronic Applications	3
	Automatic Controls 2	5
	Analysis Instruments	3
	Electronics 2	4
	Computer Control	2
	Instrument Design Drafting	2

Air Conditioning, Refrigeration, Engineering Technician

North Campus

Four semesters beginning September

As an air conditioning and refrigeration technician you will have a broad and intensive knowledge of the design, installation and operation of heating and air conditioning systems in residential, commercial and industrial buildings. As a technician you will also be able to size and select environmental and pollution control equipment.

Admission Requirements

Ontario Secondary School Graduation Diploma
Grade 12 English, grade 12 technical or academic mathematics and a minimum of 2 credits in any combination of senior level science and program-related senior level technical courses
Technical subject and physics at the senior level are strongly recommended

Job Opportunities

As a graduate, you may work for a design contractor, in installation, service, and retro-fitting of existing buildings, including energy audits. Opportunities exist as sales representatives, or specifications writers. With experience you can become an estimator and should work with plans and specifications to determine material and labour requirements in preparation of contract bids. Design contractors are responsible for design selection, layout, and specification of mechanical equipment to meet end-user requirements. Senior positions in this area include: project manager (in charge of a specific company project, responsible for installation as designed, materials control, and on-site problem solving...service manager (responsible for supervising after sales service, publishing service information, and providing technical training to employees and customers).

Curriculum

Semester 1	(26 hours/week)	Credits
	Mathematics 1	3
	Physics (Heat, Light & Sound)	3
	Psychrometrics	3
	Refrigeration 1	4
	Residential Systems	3
	Design Loads 1	3
	Engineering Drawing	3
	Communications 1	4
Semester 2	**(25 hours/week)**	
	Mathematics 2	3
	Physics (Mechanics & Waves)	3
	Refrigeration 2	4
	Design Loads 2	3
	Electricity 1	3
	Computer Programming 1 (Basic)	2
	Communications 2	4
	General Studies	3
Semester 3	**(24 hours/week)**	
	Mathematics 3 (Mgmt. Appl)	3
	Electricity 2	3
	Computer Programming 2	2
	Industrial Org. & Mgmt	3
	Design Loads 3	3
	Hydronics & Steam Syst. 1	3
	Comm. Syst. 1	4
	General Studies	3
Semester 4	**(25 hours/week)**	
	Calculus 1	3
	Thermodynamics	3
	Refrigeration 3	3
	Engineering & Econ. Anal. 1	3
	Comm. Syst. 2	4
	Equip. & Energy Selection	3
	Solid State HVAC Controls	3
	General Studies	3

Note: Also look at 522 Solar Engineering Technologist and 520 Energy Management Engineering Technologist to which successful students can transfer in third year.

Energy Management Engineering Technologist

North Campus

Six semesters beginning September

This program will provide its graduates with a broad and intensive knowledge of the design, operation and installation of energy systems for residential, commercial and industrial building complexes.

A graduate will be capable of applying engineering principles and conventions to achieve optimum energy conservation through a process of evaluation, monitoring, control, assessment and corrective action.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- grade 12 English, grade 12 academic or technical mathematics, senior level physics and chemistry, or any combination of senior level science and technical subjects
- movement from semester 4 to 5 requires a 75% average in semester 4 (70% with permission).

Job Opportunities

A graduate of this program can expect a wide variety of employment opportunities in the residential, commercial and industrial sectors as well as in government departments at the federal, provincial and municipal levels. Graduates will be in demand by heating, ventilating and air conditioning equipment manufacturers, consulting engineers, architects, manufacturing industries, process industries, wholesalers, mechanical contractors and building owners (e.g. governments, school boards, hospitals, banks, chain stores and property management companies).

Curriculum

for first four semesters, see 519

Semester 5	(24 hours/week)	Credits
	Calculus 2	3
	Instrumentation 1	3
	Energy Management Technology 1	6
	Engineering & Econ. Analysis 2	3
	Hydronic & Steam Systems 2	3
	Heat Transfer	3
	Plumbing & Fire Protection Systems	3
Semester 6	**(26 hours/week)**	
	Energy Management Technology 2	6
	Instrumentation 2	3
	Process Systems	3
	Mechanical Estimating	4
	Contract Administration	3
	Lighting Systems	3
	Energy Resources & Supplies	2
	Energy Management Project & Report	3

Construction Administration (Mechanical) Technologist*

Worth

Six semesters beginning September

General

In order to respond to the need for highly-qualified construction management personnel, this option has been structured to provide the graduate with a thorough understanding and working knowledge of the principles, practices and conventions used by construction management personnel in the execution of their functions.

Admission Requirements

Air Conditioning and Refrigeration Technician Diploma or equivalent

Job Opportunities

As a graduate technologist in this program you can expect to find employment with construction contractors and construction engineering firms. You will be capable of assuming the following job functions at the junior level: quantity survey and estimating, quality control, drafting, project inspection, job co-ordination, project supervision and construction sales etc.

Curriculum
for first four semesters, see 519

Semester 5	(25 hours/week)	Credits
	Calculus 2	3
	Instrumentation 1	3
	Eng. & Economic Analysis 2	3
	Hydronic & Steam Systems 2	3
	Plumbing & Fire Prot. Syst.	3
	Quantity Surv. & Est. 1	4
	Construction Admin. 1	3
	Heat Transfer 1	3
Semester 6	**(25 hours/week)**	
	Instrumentation 2	3
	Quantity Surv. & Est. 2	4
	Process Systems	3
	Construction Admin. 2	3
	Cost Control & Analysis	3
	Business Dev. Mgmt.	3
	Construction Mgmt. Proj. & Report	3
	Construction Contract Admin.	3

*This program is an option of the Energy Management Engineering Technologist program.

Solar Engineering Technologist

North Campus

Six semesters beginning September

This program will give you an excellent background for entry into the growing renewable energy industry. Your knowledge of the principles of energy conservation and the application of solar energy to industrial and domestic heating requirements will be in demand. You will receive training in refrigeration, air conditioning and instrumentation relating to building environmental systems. Direct hands-on training in the solar laboratory, coupled with field trips will give you the experience needed to enter this important new industry.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- grade 12 English, grade 12 technical or academic mathematics and a minimum of 2 credits in any combination of senior level science and program-related senior level technical courses
- a technical subject and physics at the senior level are strongly recommended

Job Opportunities

You can expect a wide variety of employment opportunities. Your skills will be needed by refrigeration and heating companies, architects, consulting engineers, and solar equipment manufacturers. Government offices at all levels from federal to municipal will be seeking employees with your training.

Curriculum

for first four semesters, see 519

Semester 5	(24 hours/week)	Credits
	Calculus 2	3
	Instrumentation 1	3
	Eng. & Economic Anal. 2	3
	Hydronic & Steam Syst. 2	3
	Plumbing & Fire Protection Systems	3
	Solar Energy 1	6
	Heat Transfer	3
Semester 6	**(26 hours/week)**	
	Solar Energy 2	6
	Instrumentation 2	3
	Mechanical Estimating	4
	Lighting Systems	3
	Energy Res. & Supplies	2
	Solar Project & Report	3
	Computer Simulation Lab	2
	Process Systems	3

Industrial (Management) Engineering Technologist

orth Campus

s Semesters beginning eptember

The Industrial (Management) gineering Technologist program esigned to satisfy the complex eds of modern industry. As a aduate from this six-semester ogram you will be familiar with dustrial engineering and business nagement techniques that can pplied to virtually all industry siness enterprises.

Curriculum

Semester 1	(27 hours/week)	Credit
	Mathematics 1	4
	Communications 1	4
	Mechanics	4
	Statistics	3
	Manufacturing Processes 1	4
	Mechanical Tech. Drawing	4
	Total Loss Control	4
Semester 2	**(27 hours/week)**	
	Mathematics 2	4
	Communications 2	4
	Statics	4
	Time Study 1	4
	Fortran Programming for Ind. Eng.	4
	General Studies	3
	Basic Tool & Fixture Design	4
Semester 3	**(21 hours/week)**	
	Electrical Control 1	3
	Basic Strength of Materials	4
	Manufacturing Processes 2	4
	Time Study 2	4
	General Studies	3
	Metrology	3

Admission Requirements

- Ontario Secondary School Diploma
- grade 12 English, grade 12 technical or academic mathematics and a minimum of 2 credits in any combination of senior-level science and program related senior-level technical courses.

Job Opportunities

The diversity of industrial engineering technology creates a variety of employment opportunities in areas such as quality control, facilities planning, operations research, product development and procedures planning. As an industrial engineering technologist your responsibilities may include the development of work standards and manpower planning to maximize the effective use of personnel, materials and machines. This involves time studies and analysis techniques. With experience and a desire to become part of the management team, a graduate can move into a middle management position such as a production superintendent.

Semester 4	**(27 hours/week)**	
	Industrial Organization and Management	4
	Materials Sciences	3
	Elements of Accounting	4
	Stress Analysis	4
	General Studies	3
	Motion Study	3
	Quality Control	3
	Manufacturing Cost Estimating	3
Semester 5	**(27 hours/week)**	
	Methods Analysis	4
	Wage & Salary Administration	4
	Industrial Psychology	4
	Operations Research	4
	Production & Inventory Control	4
	Computer Applications	3
	Systems & Procedures	4
Semester 6	**(23 hours/week)**	
	Plant Layout & Materials Handling	8
	Computer Integrated Man.	3
	Industrial Economics	4
	Labour Relations	4
	Project Management	4

Safety Engineering Technologist

orthCampus

Six semesters beginning September

As a safety professional you will be involved in recognizing and evaluating potential loss-producing conditions due to occupational hygiene and safety problems. You will also be involved in the development of practical programs to prevent and control these potential losses.

The physical sciences, mathematics and management techniques with special emphasis on the concepts of occupational hygiene and safety engineering are topics considered in this program.

Admission Requirements

Ontario Secondary School Graduation Diploma

Grade 12 English, grade 12 technical or academic mathematics and a minimum of 2 credits in any combination of senior level science and program related senior level technical courses

Job Opportunities

As a graduate of Safety Engineering Technology you may find a challenging and rewarding career in various industries such as mining, forest products, petrochemical, construction and manufacturing. Opportunities also exist within government agencies, safety associations and labour organizations. Possible positions include safety coordinator, loss control analyst and accident investigator.

Safety coordinators are actively involved in ensuring the health and safety of workers on and off the job. This position requires current knowledge of health and safety legislation and the ability to apply this knowledge to the everyday work situation of all employees.

Curriculum

Semester 1	**(27 hours/week)**	**Credit**
	Mathematics 1	4
	Communications 1	4
	Mechanics	4
	Manufacturing Processes 1	4
	Mechanical Technical Drawing	4
	Total Loss Control	4
	Statistics	3
Semester 2	**(25 hours/week)**	
	Mathematics 2	4
	Communications 2	4
	Statics	4
	Fortran Programming for Ind. Eng.	4
	Fire Protection	4
	General Studies (2)	6
Semester 3	**(27 hours/week)**	
	Occupational Health (Chemical Agents)	4
	Electrical Controls 1	3
	Basic Strength of Materials	4
	Manufacturing Processes 2	4
	Plant Layout	4
	Physics (Heat, Light & Sound)	3
	General Chemistry 1	4
Semester 4	**(25 hours/week)**	
	Calculus 1	4
	Industrial Security	3
	Occupational Health (Physical Agents)	4
	Industrial Organization & Management	4
	A.V. Techniques	4
	Process Industries & Plant Safety	2
	Stress Analysis	4

Loss control analysts are instrumental in reducing costs, improving working conditions and thus maximizing the profits of a particular industry. This ultimately benefits the consumer since the products produced are of better durability, reduced hazard, and lower prices.

Accident Investigators are able to use technical experience and knowledge to investigate causes of accidents. Recommendations are then made that help to prevent similar incidents in the future.

Field Trip

- Every second year a safety engineering field trip is taken through Ontario. The trip is optional but strongly recommended. The College provides transportation but students pay for food and accommodation. Optional projects are provided for students who do not participate in the field trips.

Semester 5	**(22 hours/week)**	
	Computer Applications	3
	Operations Research	4
	Product & Public Safety	4
	Environmental Health	4
	General Studies	3
	Industrial Psychology	4
Semester 6	**(23 hours/week)**	
	Project Management	4
	Occupational Health (Lifestyle)	4
	Elements of Accounting	4
	Industrial Economics	4
	Labour Relations	4
	Safety Program Development	3

Electromechanical Engineering Technician

North Campus

Four semesters beginning September and January each year.

As an Electromechanical Engineering Technician you will be involved in testing and evaluating the perfonnance of machines and control systems that use hydraulic, pneumatic, mechanical, electrical and electronic power as their energy source. You may also provide advice on the maintenance of complex equipment control systems, analyse technical problems involving fluid power equipment and plans, and, install and inspect the installation of such equipment in a variety of industries.

Students may be required to place refundable deposits on such items as lab manuals or other items supplied by the College.

Admission Requirements

Ontario secondary school graduation diploma
grade 12 English, grade 12 technical or academic mathematics
minimum of two credits in any combination of senior level science and program-related technical courses
Electricity, physics and/or machine shop at a senior level are strongly recommended

Job Opportunities

Electromechanical Technicians find employment in different branches of industry that use computer control systems including: fluid power, electrical, electronic and mechanical components. Your training and knowledge will enable you to work in component testing programs, system installation, technical services, technical sales, and in plant maintenance programs.

Curriculum

Semester 1	(23 hours/week)	Credits
	Mathematics 1	4
	Communications 1	4
	Mechanics	4
	Manufacturing Processes 1	4
	Mechanical Technical Drawings	4
	Machining Processes	3
Semester 2	**(26 hours/week)**	
	Mathematics 2	4
	Communications 2	4
	Statics	4
	Fluid Mechanics	4
	General Studies (2)	6
	Computer Programming	4
Semester 3	**(26 hours/week)**	
	Kinematics of Machines	3
	Mechanical Power Transmission	4
	Basic Strength of Materials	4
	Industrial Hydraulics	4
	Manufacturing Processes 2	4
	Logic 1	4
	Electrical Control 1	3
Semester 4	**(27 hours/week)**	
	Microcomputer Control 1	3
	Stress Analysis	4
	CAD 1	3
	Industrial Pneumatics	4
	Fluid Power Circuits 1	4
	Numerical Control 1	3
	General Studies	3
	Material Sciences	3

Electromechanical Engineering Technologist

North Campus

Six semesters beginning September and January each year.

Upon successful completion of the four semesters of the Electromechanical Engineering Technician training you may be eligible to continue for two additional semesters to complete the Electromechanical Engineering Technologist program. During the fifth and sixth semesters you will have rounded out your knowledge by studying complex systems involving automation, microcomputers, robotics, CAD/CAM and their applications to industry.

Students may be required to place refundable deposits on such items as lab manuals or other items supplied by the College.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- grade 12 English, grade 12 technical or academic mathematics
- a minimum of 2 credits in any combination of senior level science and program-related senior level technical courses
- electricity, physics and/or machine shop at the senior level are strongly recommended
- Note: in order to continue into third year of the Electromechanical Engineering Technology program, students must meet the requirements for the Electromechanical Technician diploma with a minimum grade point average of 75% (70% with permission).

Curriculum

For first four semesters see 525

Semester 5	(27 hours/week)	Credit
	Electrical Control 2	3
	Fluid Power Circuits 2	4
	Machine Design 1 (Project)	4
	Numerical Control 2	5
	Metrology	3
	Industrial Instrumentation 1	4
	Electromechanical Controls 1	4
Semester 6	**(21 hours/week)**	
	Calculus 1	4
	Microcomputer Control 2	4
	Machines Design 2 (CAD 2)	3
	Automation Systems	4
	Thermodynamics	3
	Electromechanical Controls 2	3

Job Opportunities

As an Electromechanical Engineering Technologist, you will be involved in the design of automation systems and their control functions, in sales, in maintenance or in consulting. The actual opportunities are as varied as the number of industries who would use your skills.

You may enjoy challenges in the sales of major fluid power systems, assisting in the design and operation of computer controlled manufacturing systems: or supervision in various departments of manufacturing or service companies, using high technology robotics and CAD/CAM (Computer Aided Design/Computer Aided Manufacturing) Systems.

Manufacturing Engineering Technician

North Campus

Four semesters beginning September and January each year.

Manufacturing Technicians decide how a product is to be manufactured, what types of machines are to be used, the kinds of materials required, and the sequence of production and methods. As a graduate of this four-semester program you will be able to develop the manufacturing procedures for parts produced by machining processes, presswork methods and plastics technology, and then subsequently assembled into a product. Skills are developed through practical experience in a modern production laboratory equipped with computer controlled equipment such as 5 axis CNC machining centres and CAD/CAM technology.

Admission Requirements

Ontario Secondary School Graduation Diploma
Grade 12 English, grade 12 technical or academic mathematics
A minimum of 2 credits in any combination of senior level science and program-related senior level technical courses
Electricity, physics and/or machine shop at the senior level are strongly recommended

Job Opportunities

Manufacturing Technicians are involved in the scheduling, coordination and cost analysis of ongoing manufacturing, and the emergency and preventative maintenance systems of manufacturing operation.

Troubleshooting and project responsibilities in process planning, tool design and quality control are also included as part of the Manufacturing Technician's job. A graduate of this four-semester program may be eligible to enter the fifth semester of Manufacturing Engineering Technology. Successful completion of the fifth and sixth semesters allows students to graduate as a Manufacturing Engineering Technologist.

Curriculum

Semester 1	**(26 hours/week)**	**Credits**
	Mathematics 1	4
	Communications 1	4
	Mechanics	4
	Manufacturing Processes 1	4
	Mechanical Technical Drawing	4
	Machining Processes	3
	Metrology	3
Semester 2	**(27 hours/week)**	
	Mathematics 2	4
	Communications 2	4
	Statics	4
	Basic Tool & Fixture Design	4
	Time Study 1	4
	Computer Programming	4
	General Studies	3
Semester 3	**(27 hours/week)**	
	Mathematics (Dynamics)	4
	Basic Strength of Materials	4
	Industrial Hydraulics	4
	Manufacturing Processes 2	4
	Die Design 1	5
	CAD 1	3
	Electrical Control 1	3
Semester 4	**(24 hours/week)**	
	Numerical Control 1	3
	Manufacturing Cost Estimating	3
	Manufacturing Process Planning 1	5
	Industrial Pneumatics	4
	General Studies	6
	Motion Study	3

Manufacturing Engineering Technologist

North Campus

Six semesters beginning September and January each year

Upon successful completion of the four semesters of Manufacturing Engineering Technician's training, you may be eligible to continue for two additional semesters to complete the Manufacturing Engineering Technology program. These additional semesters enable you to study complex problems in specialized manufacturing processes and costing.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- grade 12 English, grade 12 technical or academic mathematics and a minimum of 2 credits in any combination of senior level science and program-related senior level technical courses
- electricity, physics or machine shop at the senior level are strongly recommended
- Note: in order to continue into third year of the Manufacturing Engineering Technology program, students must meet the requirements for the Manufacturing Engineering Technician diploma with a minimum grade point average of 75% (70% with permission).

Curriculum

For first four semesters see 527

		Credits
Semester 5	**(23 hours/week)**	
	Statistics	3
	Numerical Control 2	5
	Plant Layout	4
	Electrical Control 2	3
	Production & Inventory Control	4
	Manufacturing Process Planning 2	4
Semester 6	**(23 hours/week)**	
	Calculus 1	4
	Material Sciences	3
	Quality Control	3
	Technical Project (Field)	6
	Project Management	4
	Computer Integrated Manufacturing	3

Job Opportunities

As a key person on an engineering team, you may become involved in the development, implementation and debugging of production processes. You may also become part of a support group which deals with inventory control, plant layout, estimating and quality control. Employment alternatives include Process Technologist, Manufacturing Supervisor and Cost Estimator. Process Technologists initiate and coordinate the design and purchase of equipment and tooling that would efficiently produce the present product line and new lines of the future. Manufacturing supervisors are part of a team involved in troubleshooting, design, and the development of people skills that meet the demand of current technology. Cost Estimators accurately "guesstimate" the manufacturing and production costs of a new part or product that is being considered for the consumer market. These skills will be taught using a number of sophisticated CAD/CAM systems.

Mechanical Engineering Drafting Design Technician

North Campus

Four semesters beginning September and January each year

As a graduate of the Mechanical (Drafting Design) Engineering Technician Program you are prepared to apply design principles and practices to a variety of engineering and mechanical design problems.

This four-semester program provides the background and skills to design and develop layout drawings and prepare working drawings on the newest CAD/CAM systems and determine specifications and materials for the manufacture or performance of a component, assembly or a major process installation.

Admission Requirements

Ontario Secondary School Graduation Diploma

Grade 12 English, grade 12 technical or academic mathematics and a minimum of 2 credits in any combination of senior level science and related senior level technical courses

Drafting and physics at the senior level are strongly recommended

Job Opportunities

Graduates may expect to find employment in areas related to drafting and design, testing, estimating, mechanical equipment installation, consulting, and machinery sales. They will be familiar with the latest computer assisted design drafting techniques which many companies seek.

Curriculum

Semester 1	(24 hours/week)	Credits
	Mathematics 1	4
	Communications 1	4
	Mechanics	4
	Fundamentals of Manufacturing Processes	4
	Mechanical Technical Drawing	4
	Computer Programming	4
Semester 2	**(26 hours/week)**	
	Mathematics 2	4
	Communications 2	4
	Statics	4
	Mechanical Design & Drafting 1	8
	General Studies (2)	6
Semester 3	**(24 hours/week)**	
	Kinematics of Machines	3
	Basic Strength of Materials	4
	Mechanical Power Transmission	4
	Mechanical Design & Drafting 2	7
	Electrical Control 1	3
	CAD 1	3
Semester 4	**(26 hours/week)**	
	Fluid Mechanics	4
	Mechanical Design & Drafting 3	6
	Numerical Control 1	3
	Stress Analysis	4
	Material Sciences	3
	General Studies	3
	CAD 2	3

Mechanical Engineering Tool & Die Technician

North Campus

Four semesters beginning September.

Mechanical tool and die technicians are able to design and draw tools, prepare manufacturing processes, evaluate methods of production, materials, manufacturing costs and tool performance and use CAD/CAM equipment.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- grade 12 English, grade 12 technical or academic mathematics
- a minimum of 2 credits in any combination of senior level science and program related senior level technical courses
- drafting, physics and machine shop at the senior level are strongly recommended

Job Opportunities

As a tool and die technician there are numerous areas of employment in manufacturing industries including automotive and aeronautical and consulting engineering firms, and the tool design offices of specialized tooling companies. Entry jobs are at a junior level but after a few years of experience graduates become die designers and cost estimators or process analysts. Die designers are responsible for the layout and detailing of dies, determining production sequence and cost. Cost estimators prepare and detail the manufacturing cost requirements for new or modified parts for a manufacturing facility. Process analysts are involved in developing the tooling and operational sequence for continuous line manufacturing. This type of manufacturing includes the production of engines, electric motors, consumers products and military systems.

Curriculum

		Credits
Semester 1	**(23 hours/week)**	
	Mechanics	4
	Manufacturing Processes 1	4
	Mechanical Technical Drawing	4
	Machining Processes	3
	Communications 1	4
	Mathematics 1	4
Semester 2	**(27 hours/week)**	
	Statics	4
	General Studies	3
	Tool & Fixture Design	8
	Communications 2	4
	Mathematics 2	4
	Computer Programming	4
Semester 3	**(26 hours/week)**	
	Mathematics (Dynamics)	4
	Basic Strength of Materials	4
	Manufacturing Processes 2	4
	Die Design 1	5
	Metrology	3
	CAD 1	3
	Electrical Control 1	3
Semester 4	**(24 hours/week)**	
	Die Design 2	6
	Manufacturing Cost Estimating	3
	Numerical Control 1	3
	Material Sciences	3
	CAD 2	3
	General Studies (2)	6

Mechanical Engineering Numerical Control Technician

orth Campus

our semesters beginning eptember and January each ear.

Numerical Control is the most odern way of controlling produc- n machinery. In this program ou will learn to write and process ograms from part drawings to ached tape, or DNC (direct merical control) to guide the NC equipment. You will learn to lect the proper tooling and turing required for machining rious different parts. You will arn to prepare manual and mputer assisted programs on the est CAD/CAM systems for the st advanced numerical control achinery, including five axis achining centres, but you will so learn hands-on how to operate ese machines for program bugging and parts machining.

dmission Requirements

tario Secondary School Graduan Diploma
ade 12 English, grade 12 techni- or academic mathematics
inimum of 2 credits in any comnation of senior level science d program related senior level hnical courses
ctricity, physics and/or machine op at the senior level are strongly commended

ob Opportunities

Technologically-modern compaes are looking for qualified C operators and programmers. ese industries include aircraft aerospace, automotive, icultural machinery, plastics, d rubber manufacturing, instruentation, and service industries. achine-tool sales and servicing, CNC programming services additional areas.
Numerical control programmers culate dimensions from drawgs to numerical control machines epare tooling and fixturing formation for the shops. As a supervisor you would set up the machine, check the tape for correctness and accuracy, make recommendations to improve productivity. As a sales representative you would assist the sales department with technical know-how, train operators and programmers for customers, and prepare sample programs for demonstration.

Curriculum

Semester 1	(23 hours/week)	Credits
	Mathematics 1	4
	Communications 1	4
	Mechanics	4
	Manufacturing Processes 1	4
	Mechanical Technical Drawing	4
	Machining Processes	3
Semester 2	**(27 hours/week)**	
	Mathematics 2	4
	Communications 2	4
	General Studies	3
	Statics	4
	Numerical Control 1	4
	Basic Tool & Fixture Design	4
	Computer Programming	4
Semester 3	**(25 hours/week)**	
	Mathematics (Dynamics)	4
	Numerical Control 2	5
	Manufacturing Processes 2	4
	Metrology	3
	CAD 1	3
	General Studies	3
	Electrical Controls 1	3
Semester 4	**(25 hours/week)**	
	Numerical Control 3	6
	Manufacturing Cost Estimating	3
	Material Sciences	3
	Manufacturing Processes and Planning 1	5
	General Studies	3
	CAM 1	5

Small Craft & Marine Technology

Queensway B Campus

Four semesters starting September

As a student in the Small Craft & Marine Technology program, you will acquire a broad technical and practical understanding of small craft, their design, construction, operation, maintenance and repair. You also become familiar in the practical business and managerial aspects of a variety of yachting support and service activities such as: marina and yacht club operation, boat building and repair, wholesale and retail marketing of small craft and their equipment, yacht brokerage and charter fleet operation. The program structure is flexible, taking into account the needs of both full-time and part-time students – many of whom bring with them previous business, professional, trades, craft and seamanship experience.

Admission Requirements

- Ontario Secondary School Graduation Diploma
- grade 12 English
- grade 12 technical or academic mathematics credits
- a minimum of 2 credits in any combination of senior level science and program-related senior level technical courses with passing grades

Job Opportunities

A great variety of occupations exist for graduates of the Yachting Studies program. Boat building, boat maintenance and repair, wholesale, retail outlets, marina operations, club management, yacht brokerage and charter, federal, provincial, and municipal agencies, sailing schools/community courses in on-water activities.

Curriculum

		Credits
Semester 1	**(25 hours/week)**	
	Communications 1	4
	Mathematics for S-C & MT	4
	Seamanship 1 Power & Sail	3
	Yacht Maintenance & Repair 1	8
	Marina/Yacht Club Design, Const. & Oper. 1	3
	Sails & Rigging	3
Semester 2	**(24 hours/week)**	
	Communications 2	4
	General Studies	3
	Marina/Yacht Club Design, Const. & Oper. 2	3
	Yacht Maintenance & Repair 2	8
	Navigation	3
	Electrical Circuits & Applications	3
Semester 3	**(27 hours/week)**	
	General Studies	3
	Seamanship 2-Power/Sail Yacht handling	3
	Yacht Design 1	3
	Small Craft Electronics	3
	Gas & Diesel Motors for Yachts	4
	Boatbuilding & Repair 1	8
	Marine Contracts, Insurance & Taxation	3
Semester 4	**(24 hours/week)**	
	General Studies	3
	Yacht Design 2	3
	Outboard Engines & Marine Drive Trains	4
	Boatbuilding & Repair 2	8
	Standard Operating Procedures & Office Routine	3
	Sailing School, Charter, Fleet Operations & Yacht Brokerage	3

Please note that a third year technologist level program suited to individual needs could be offered.

Automatic Machining Setter Operator

Queensway B Campus

33 weeks beginning every Monday

This program is designed to prepare you for employment as an automatic screwmachine operator. This is a very sophisticated machine tool that is used in most industries such as auto, aero, and appliance industries. You will be working on both single and multi-spindle machines. These machines are used to produce turned (cylindrical) components of many shapes and sizes at speeds which few machines can match. They are controlled by the use of cams, gears and cutting tools which must be precisely set for each part produced. The screw-machine operator is always in great demand by this rapidly growing industry. The work week is generally five days, forty hours, with the possibility of shift work. Most screwmachine shops are noisy, and your hands may get dirty and oily. The job is very creative and rewarding.

Curriculum

Program Outline

	Measuring Instruments, Quality Control, Blue Print Reading
	Single Spindle Machine Orientation and Set-up (construction, lubrication, etc.)
	Multiple Spindle and set-up (Acme Gridley & Davenport machines)
	CNC Screw Machine set-up

Admission Requirements

- pretests in communications and mathematics
- admissions interview
- a working knowledge of mathematics, including whole numbers, fractions, decimals, percentages, and measurement
- you will also be required to be able to speak, read, and understand the English language without difficulty

Job Opportunities

Graduates of our training program have found employment in the screwmachine industry as single and multi-spindle operators, and turret lathe operators. In addition, with some on-the-job experience after graduating from the program, you may become a screwmachine setter or cam and tool designer.

Cabinet Making

Queensway A Campus

48 weeks starting any Monday

Graduates of the Cabinet Making program will have studied the design and construction aspects of commercial and residential woodwork. They will have mastered the necessary skills for identifying, manufacturing and using the various wood joints, and will also learn how to use hand or power tools to produce them. They will also acquire a knowledge of wood finishes, their application by hand and mechanical means and a knowledge of the natural and man-made materials used in cabinet making.

Admission Requirements

- admissions interview
- pretests in communications and mathematics to be conducted at the college, at least one week prior to the student's proposed start date
- mathematical facility with whole numbers, fractions, decimals, percentages and measurement
- a good command of conversational English is also required.

Job Opportunities

Employment opportunities for men and women include design, construction, finish, installations, repair and modifications to commercial and residential cabinets, construction, refinishing and repair of furniture, installation of fine quality interior residential and commercial building woodwork and the interior finishing of sail and power boats and motor homes.

Curriculum

Program Outline
Veneer (kinds, applications, cutting, etc.)
Plastic Laminates (composition, uses, grade, etc.)
Hand Tools (safety rules, measuring, maintenance, etc.)
Fasteners and Sandpaper (nails, screws, etc.)
Wood Joints (identification and fabrication)
Portable Power Tools and Stationary Power Tools
Hardware (identification and installation of cabinet hardware)
Cabinet Construction
Finishing (staining, filling, protection)
Drafting (basic principles)
Special project: produce a project from specifications
Life Skills

Digital Equipment and Systems Electronics Certificate

Queensway A Campus

48 weeks is the average (prepared learning packages allow variable pace)

There is a growing need for digital and microprocessor-based electronic systems. Most electronic systems developed in the 1980's contain digital circuits. Some examples are microcomputers, automotive electronic systems, televisions and data communication systems.

The basic electronics of this program is common to that in the Radio and TV Receivers and Mobile Radio Communications program, but the latter part of the program specializes in varying types of digital systems.

Admission Requirements

- pre-admission interview
- pretests in communications and mathematics
- basic mathematical skills such as adding, subtracting, multiplying and dividing of whole numbers and fractions. Skills in basic algebraic expressions, and ratios will also be required.
- ability to effectively read and comprehend English

Curriculum

Program Outline

	Direct current circuits
	Alternating current circuits
	Solid state devices
	Electronic circuits and applications
	Basic digital logic circuits
	Microprocessors
	Analysis of microprocessor based systems
	Troubleshooting and repair of microprocessor based systems

Job Opportunities

Graduates may expect to work for manufacturers, vendors and users of digital equipment as troubleshooters, maintainers, and installers.

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Drafting

Queensway B Campus

This is a continuous-intake 40-week program using prepared learning packages. Teachers are available on a one-to-one basis.

This program is designed to prepare you for employment in either the mechanical or architectural drafting field. Once the mandatory objectives are completed, the students may undertake optional objectives (such as Jig & Fixtures, Structural Steel, Process Piping, Survey, and Electrical Drawings).

Most of the student's time is spent in practical drafting but time is given to drafting theory, mathematics (strength of materials) and an introduction to computers and Computer-Aided Drafting Systems. For more information call 252-9441.

Admission Requirements

- pre-admission interview
- pretests in communications and mathematics
- working knowledge of mathematics including signed numbers, square root and powers, substitution, equations, formulas, graphing and geometry
- good command of English (written and verbal) is also required
- physical requirements for drafting include: sitting, reaching and handling

Curriculum

Program Outline

- Make multi-view drawings
- Make mechanical assembly and detail drawings
- Select ferrous and non-ferrous metals
- Make architectural working drawings
- Mathematics (strength of materials)
- Introduction to Computers and computer-aided drafting systems
- Life skills

Job Opportunities

After graduating, you may find opportunities for employment in the manufacturing industry, architectural offices and engineering offices. Since the initial training for all draftsmen is the same, a transfer to another area of the work is possible with additional training and experience. Transfer could be to any one area of architectural, electrical, mechanical, structural or technical drawing. A forty hour, five day work week is usual. With experience and good leadership qualities, you may advance to supervisor draftsman.

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SHORT PROGRAMS

Drafting Refresher

Queensway B Campus

This program is of particular interest to draftsmen who have been away from the board for some time and wish to return to their former occupation. It will also be useful to draftsmen and engineers from other countries, to acquaint themselves with Canadian methods and standards prior to obtaining employment. An introduction to Computer Aided Drafting systems will also be included in the program. Call 252-9441 for more information.

Industrial Instrumentation Mechanic

Queensway A Campus

Forty weeks beginning any Monday

The Industrial Instrumentation Mechanic program will enable you to function in today's technical and automated industries. Some of the subjects included in this program are mechanics, electronics, physics and chemistry. Graduates from this program will exhibit the ability to calibrate, troubleshoot, repair and maintain instruments for process measurement and control.

Admission Requirements

An admissions interview, as well as pretests in communications and mathematics, to be conducted at the College, is required at least one week prior to your proposed starting date. You should have a working knowledge of mathematics, including substitution, equations, formulae, graphing, and trigonometry.

Curriculum

Program Outline

- Pressure Measurement
- Flow Measurement
- Level Measurement
- Temperature Measurement
- Electronics
- Mechanical Practice
- Calibration Principles and Techniques
- Pneumatic Instruments Theory and Applications
- Electronic Instruments, Theory and Applications
- Automatic Control Theory and Applications
- ISA Symbols and Process and Instrument Diagrams

Job Opportunities

This occupation requires that a person enjoy dealing with physics and electricity. It requires logical thinking, numerical ability, and the ability to understand the principles of instrumentation construction and operation, and the skill to apply appropriate techniques for installation, repair and adjustment. The prospect for employment is excellent. There is an increased need for well-trained men and women to maintain, service, operate, and sell instrumentation equipment. Graduates of this program will be in demand in a great variety of industries. Duties may include maintenance, repair, calibration and troubleshooting.

Transfer is possible to other positions within the occupation requiring similar skills or with limited additional training such as analytical instrumentation with oil companies and government laboratories.

Industrial Maintenance Mechanic (Packaging), (Millwright)

Queensway B Campus

Length of program varies according to student's pace. Teachers are available to students on a one-to-one basis (approximately 48 weeks)

We offer two programs: Industrial Maintenance (Millwright) Mechanic and Packaging Machine Mechanic.

These programs share a common core. The Millwright program is a regulated trade and so this program can be accessed by apprentices. The Packaging Mechanic program is due to be regulated August 1984 and will also be accessible to apprentices. Those who are not already apprenticed can take the courses as fee paying students. (The fact that you have completed the in-school portion can be a benefit to some employers.) Both non-regulated programs can be sponsored by C.E.I.C. or U.I.C. agencies.

Length of program varies according to student's pace. Teachers are available to students on a one-to-one basis (approximately 48 weeks). Students are trained to set up and adjust machines, change tooling, maintain and repair, overhaul, service the various machines used in the service, supply and process industries. This program specializes in various packaging machines used in filling, wrapping, canning, and bottling plants. Training is provided in hand and bench tools, machining, welding, pneumatics and hydraulics, electrical controls and mechanical drives, including repair, troubleshooting, and preventative maintenance.

SHORT PROGRAMS

Admission Requirements

- pre-admission interview
- pretests in communications and mathematics
- working knowledge of mathematics including equations and formulae
- good command of English (written and verbal)

Curriculum

Program Outline
Common core topics:

- Safety
- Measuring tools
- Bench tools & fabrication
- Hand tools & rebuild techniques
- Blueprints & sketching
- Welding & brazing
- Soldering
- Power transmission components
- Lathes & mills & grinders
- Cams & levers & timing
- Conveyors
- A.C./D.C. electricity
- Electrical controls
- Pneumatics/hydraulics
- Industrial Maintenance (Millwright)
- Overhaul & Maintain machines
- Try out, test & run machines
- Troubleshoot machines
- Rigging & installation
- Packaging Machine Mechanic
- Packaging machine controls
- Machine set-up
- Machine maintenance
- Troubleshoot machines

Interests and Skills

- ability to understand the principles of mechanics to apply them in the set-up, repair, and maintenance of machine parts
- knowledge of the principles of mechanics is a prerequisite for this program
- ability to carry equipment up to 30 pounds in weight, as well as good eyesight and the ability to see colours distinctly

Job Opportunities

Industrial Maintenance Mechanics find employment working on a variety of equipment such as pumps, gear boxes, clutches, and mechanical items. Duties include troubleshooting mechanical problems in these devices.

Packaging Machine Mechanics find employment in the food, pharmaceutical, beverage, and chemical industries, where you will set up and adjust packaging machines, change tooling, and maintain, repair and troubleshoot mechanical, electrical, and fluid power on the various packaging machines used in these fields.

Queensway B Campus

Forty Weeks starting every Monday

This forty-week program enables the student to demonstrate competence in machine shop safety practices and procedures found in industrial shop situations, select and correctly use hand tools safely according to instructions and/or print specifications, select and correctly use appropriate measuring tools to measure within verbal and/or print specifications, identify and select ferrous and nonferrous metals for their specified application in machining work pieces, safely set-up and operate within print specifications any of a variety of machine tools such as lathes, drill presses, milling machines and grinders, read and interpret blueprints and operational sequence sheets.

Admission Requirements

Admissions interview
Pretests in communications and mathematics to be conducted at the College, at least 1 week prior to the student's proposed start date
A working knowledge of mathematics including whole numbers, fractions, decimals, percentage, measurement, ratio and proportion, signed numbers, square root and power
A good command of English (written and verbal) is also required

Curriculum

Program Outline

	Safety
	Engine Lathe
	Measurement
	Milling Machine
	Hand Tools
	Surface Grinder
	Cutting Tools
	Blueprint Reading
	Drilling Machines
	practice on the above equipment
	safe methods to set up and operate each tool
	select appropriate tool and follow verbal/print specifications
	Life Skills: discuss and develop cultural, educational, political, economic and social skills, concepts and values in relation to self, family, job and community.

Marine and Small Powered Equipment Mechanic

Queensway A Campus

This is a continuous-intake 40-week program using prepared learning packages. Teachers are available on a one-to-one basis.

This program is designed to prepare you for employment as a mechanic for such things as two and four stroke engines, recreational vehicles, marine propulsion units, lawn and garden equipment and chain saws. You will learn how to repair and refinish fibreglass, use service manuals and parts books, use special service tools, weld, cut and braze metals, and carry out basic machining procedures.

Admission Requirements

- After pretests in communications and mathematics (conducted by the College), you will attend an admissions interview at least one week prior to your proposed starting date. You should have a working knowledge of mathematics, including whole numbers, fractions, decimals, percentages and measurement. You should also be able to speak, read, and understand the English language without difficulty.

Job Opportunities

Opportunities exist in marine equipment dealerships, marinas, sports equipment and rent-all stores, construction equipment dealerships, lawn and garden wholesalers, retail outlets, equipment service centres, golf courses, hardware and department stores. With some experience in the field after graduation, you may advance to service manager, manufacturer's service representative, or you may wish to go into business for yourself.

Curriculum

Program Outline

	Identify components, construction features and operation principles of 2 and 4 stroke engines.
	Identify operation principles of carburetors, fuel pumps and supply systems (repair and adjust).
	Explain operation of magneto, CD and battery ignition systems (repair, adjust and maintain).
	Identify the nature, type, purpose and application of lubricants.
	Parts and service manuals—determine part numbers, prices and service procedures.
	Identify and properly use hand and power tools and test equipment.
	Repair and refinish metal and fibreglass components and equipment.
	Identify and properly use hand operated machining tools, accurately read and apply machine measuring tools.
	Diagnose faults in, adjust, repair, disassemble and rebuild mowers, garden tillers, snow blowers, garden tractors, chain saws, outboard motors, snowmobiles, boat trailors, marine rigging and wiring.
	Set up and operate oxyacetylene welding and cutting equipment.
	Explain the fundamentals of electromagnetism, inductance, capacitance, electrical circuitry and the operation of small AC and DC motors and generators.

Work Environment

- A normal five-day, forty-hour week is required. Weekend shift work may be included. Frequent physical activities include reaching , stooping, kneeling, lifting (up to 100 pounds) in an indoor/outdoor environment. For more information call 252-9441.

Mobile Radio Communications Electronics Certificate

Queensway A Campus

48 weeks is the average (prepared learning packages allow variable pace)

Areas that use mobile radio communications are police departments, security companies, fleet operators, taxi and service equipment dispatching. The use of mobile radio communications is also growing in the field of construction.

The basic electronics of this program is common to that in the Radio & T.V. Receivers and Digital Equipment and Systems program, but the latter part of the program specializes in mobile radio systems of varying types.

You will learn to install, troubleshoot, repair and align 2-way solid state mobile radio equipment.

Curriculum

Program Outline

	Direct current circuits
	Alternating current circuits
	Solid state devices
	Electronic circuits and applications
	Basic digital logic circuits
	Microprocessors
	Mobile radio receiver systems and servicing
	Mobile radio transmitter systems and servicing
	Communications antennas

Admission Requirements

- pre-admission interview
- pretests in communications and mathematics
- basic mathematical skills such as adding, subtracting, multiplying and dividing of whole numbers and fractions. Skills in basic algebraic expressions, percentages and ratios will also be required.
- ability to effectively read and comprehend English

Job Opportunities

You may expect to work for manufacturing companies of radio service systems and commercial VHF and UHF FM systems. You may also find employment with users of this equipment such as police departments, taxi companies, construction companies, telephone companies, and public utilities.

Numerical Control Machine Programmer/ Operator

Queensway B Campus

48 weeks starting every Monday

Graduates of this 48-week program are trained in the modern technological methods of numerical control machine tool operation, as well as in the writing and editing of manual-part programs. Practical skills learned include: machine set-up, tape preparation, cutter diameter and length compensation setting, and on-site modification of existing programs.
The program uses prepared learning packages (similar to those used in correspondence programs) with the maximum of personal interaction between faculty and students. This allows students maximum flexibility in their rate of progress and in individual timetables.

Curriculum

	Learn basic machine shop skills with emphasis on turning, milling and drilling.
	Learn Numerical Control machine basic preparation (lubrication, set-up and start-up).
	Solve course related mathematical problems.
	Learn Numerical Control coordinate systems, codes, technology, and programming modes.
	Learn Numerical Control machine operation and production of parts using instructions supplied by programmer.
	Dry run, debug, and troubleshoot new programs on numerical control machines
	Other topics

Admission Requirements

- pre-admission interview
- pretests in communications and mathematics
- candidates must be functioning at a Grade 10 (BTSD Level 3) for direct entry. Candidates not achieving the admission requirements will be prescribed a College Preparatory program to upgrade their academic skills to the program entrance requirements.

Interests and Skills

- A person interested in this occupation must have a basic knowledge of conventional machine shop operations and the ability to conceptualize the operations related to the programming and control of machine tools. The occupation requires an individual who is alert, perceptive and able to deal effectively with both tangible and intangible problems. Numerical ability and above average communication skills are also essential.

Job Opportunities

Progressive, technologically-modern companies are looking for well-trained operators and programmers. As these companies update their machinery, the Numerical Control Machine Programmer will be a vital member of their staff. Graduates can expect to work in industries such as production and jobbing shops, aircraft and aerospace, automotive, agricultural machinery production, plastic and rubber manufacturing, instrumentation, and service industries.

Graduates with a higher level of hands-on skill will find employment as operators and set-up persons. Those who excel in the programming area can become Numerical Control Machine Programmers and may advance into supervisory positions or into management. Additional training in computer programming and theory would enhance opportunities in Numerical Control (Systems) technology.

Generally, shops run the five-day, forty-hour work week with rotating shifts. The potential candidate can expect a limited amount of physical activity, with the greater part of the job requiring mental alertness.

Financial Assistance

- Canada Employment and Immigration Commission (CEIC)
- This program is approved by the the CEIC. If you qualify for sponsorship the cost of your tuition fees will be paid by the CEIC and may include a weekly training allowance. For further information and details on sponsorship contact your nearest Canada Employment Centre or the Registrar's Office of Humber College at 252-9441.

Precision Instrument Mechanic

Queensway A Campus

Approximately 48 weeks beginning any Monday.

Based on individualized instruction, the program provides training in the practice of precision instrument manufacturing, service and sales. Graduates will be able to construct and modify components and assemble, repair, adjust and test precision instruments.

The program emphasis is on manual and machine skills such as metal cutting, forming and turning, soldering, welding and brazing as applicable to precision instrument requirements. Included is a mechanics industrial electronics program and introduction to sheet metal processes, woodworking, industrial instrumentation, photographic equipment repair and automatic screwmachine operations.

The flexible timetable, continuous intake and the wide range of subjects makes this program an ideal basic and retraining vehicle for persons who like interesting technical work with varied opportunities for employment.

A Camera repair option is available.

CEIC sponsorship may be available to qualifying individuals.

Admission Requirements

Admissions interview

Pretests in communications and mathematics to be conducted at the College, at least one week prior to the student's proposed start date

Basic mathematical skills such as adding, subtracting, multiplying and dividing of whole numbers and fractions

Skills in basic algebraic expressions, percentages and ratios

Ability to effectively read and comprehend English will be an important asset

Job Opportunities

Precision instrument mechanics are in demand by manufacturing companies, commercial, transportation and communication concerns, government and research establishments who manufacture, import and sell, service or use complex, precision, electromechanical, electronic, optical or photographic devices. Typical instruments are microscopes, photographic apparatuses, and navigation and aircraft instruments.

Graduates move readily into a wide range of technical situations and will be involved in fine part and prototype manufacturing, equipment and systems assembling, analysis, quality control and repair work. There are more than 200 companies in Ontario alone involved in precision instrument work.

Curriculum

Program Outline (Camera Option – 18 weeks)

	General Studies
	Electric & Electronic Fundamentals
	Fabrication and Manufacturing Processes
	Precision Instrument Technology Fundamentals
	Applied Precision Instrument Technology
	Photo Technology
	Overhaul Photographic Equipment
	Administrative Requirements

(Precision – 30 weeks)

	Drafting Fundamentals
	General Studies
	Industrial Instrumentation
	Electric & Electronic Fundamentals
	High Technology
	Computer and Micro Processor Fundamentals
	Fabrication and Manufacturing Processes
	Automation & Robotics Technology
	Precision Instrument Technology Fundamentals
	Precision Instrument Services and Repair
	Applied Precision Instrument Technology
	Welding & Sheet Metal Technology
	Electrical Circuits & Applications

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Radio and TV Receivers Electronics Certificate

Queensway Campus

48 Weeks is the average (prepared learning packages allow variable pace)

This program is designed to prepare you for employment in the electronics industry. You will apply theory and practice in basic circuit behaviour, solid state techniques, AM and FM radio, monochrome and colour T.V. You will also get experience on various types of test equipment used in the electronics service industry.

Admission Requirements

- pre-admission interview
- pretests in communications and mathematics
- basic mathematical skills such as adding, subtracting, multiplying and dividing of whole numbers and fractions. Skills in basic algebraic expressions, percentages and ratios
- ability to effectively read and comprehend English

Curriculum

Program Outline

- Direct current circuits
- Alternating current circuits
- Solid state devices
- Electronic circuits and applications
- Digital Circuits
- AM and FM receiver systems
- Television systems and servicing
- Basic digital logic systems
- Microprocessors

Job Opportunities

Since the emphasis in this program is on troubleshooting and repairing electronic equipment, you can expect to work for companies who manufacture, distribute, and service many kinds of equipment. Jobs include the repair of radios and television receivers, auto radios and audio equipment, cable T.V. equipment, closed circuit T.V. equipment, security systems, office copying equipment and industrial automated production equipment. Opportunities also exist as sales/ service representatives with electronic distributors.

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Skills Update Electronic Certificate

SHORT PROGRAMS

Queensway A Campus

Specific short programs are set up to meet the objectives of individual students. Typical objectives could be meter reading, use of specific test equipment, component identification, assembly techniques, or soldering.

PREREQUISITE: Personal interview, by appointment, with Program Coordinator.

NOTE:
This program may be taken full-time, evenings or day-time. This flexibility should appeal to shift workers, or employers who wish to release employees for a period of in-college training to upgrade their skills. Because you work at your own pace on prepared objectives the program length, the timetable, even the course content can be modified by you or your employer.

CEIC sponsors some students in this program. Please contact your local office. Please note that graduates of this technical program are normally admitted into any related post-secondary technician/ technology program offered throughout the Technology Division.

Contact 252-9441 for registration information.

Queensway Campus

40 weeks starting every week

Graduates of this program are proficient in fitting and welding pre-fabricated cast and forged metal components, applying knowledge of the physical properties of metal and the effects of heat, allowing for thickness, machining, and weld shrinkage. The student also learns metal products repair including dismantling, straightening, reshaping, and re-assembling parts using a cutting torch, straightening press, and hand tools.

Admission Requirements

admissions interview
pretests in communications and mathematics, to be conducted at the college, at least one week prior to the student's proposed start date
mathematical facility with whole numbers, fractions, decimals, percentages, measurement, ratio and proportion
good command of English (written and verbal)

Curriculum

Program Outline

	Shielded Metal Arc Welding, Downhand
	Joint, Electrodes and Symbols
	Shielded Metal Arc Welding, Vertical up and overhead
	Oxy-acetylene Welding, Downhand
	Oxy-acetylene Corner, Edge, Fillers, Butt Joints
	Tungsten Inert Gas Welding, Downhand
	Metal Inert Gas Welding, Downhand

Job Opportunities

Graduates may work in specialized welding shops or large and small general manufacturers in which welding is an integral part of production (i.e. construction and/or transportation)

Course Descriptions

Communications

Communications 1

This course develops the writing skills which will help students meet the requirements of both college and their chosen vocation. Emphasis is placed on mastery of basic research and writing techniques for clarity. There is also opportunity for continued development of reading comprehension.

Prerequisite: Language Skills or equivalent

Communications 2

This level emphasizes research and vocational planning. Students learn to present ideas clearly, concisely, and effectively both in writing and in speaking. At this level, style, form and creativity are stressed. In addition to writing business correspondence and reports, students prepare a career-related document file.

In addition to the Communications courses, the Human Studies Division operates a Language Development Centre which provides tutorial assistance in English. Any student in the college may go to the Centre on a drop-in basis for help. Instructors also refer students for additional help in their regularly scheduled courses.

Language Skills

Most students must complete Communications 1 and 2 as part of their program.

The primary aim of this course is to help students improve their writing. Since reading and writing are interdependent skills, the course will also devote some time to reading as a source of information for writing. Assignments will often integrate practice in both reading and writing. This course will emphasize sentence structure but will introduce the entire writing process. With each assignment, students will be taught to choose and limit their topic and define audience and purpose for writing.

General Studies

A Question of Morality

The purpose of this course is to explore the problems involved in making moral and ethical decisions. We will study four basic theories which attempt to explain where our moral rules originate. We will look at the consequences of moral actions for the individual and society. The basic theoretical principles will be applied to important moral issues and we will study the role of schools in teaching morality.

Abnormal Psychology

No one is immune to psychopathology. Everyone has his "breaking point". This course represents a blend of psychopathological theory and phenomenological analysis of the kind of concrete data found in case studies. Each case study represents a major psychopathological condition. Phenomenological conceptions are stressed in the working up of psychopathological profiles. Some of the profiles studied are: transient situational disorder, the neuroses, schizophrenia, manic-depressive psychosis, sexual deviations, alcoholism, and psychosomatic reactions. The different treatment methods are given limited attention, in that this course does not have as one of its aims the preparation of therapists.

Age of the Microchip — Miracles and Casualties of Computerization

We are in the midst of a new age—that of the microchip. Since its introduction in the early 1970's, we have been inundated with them. Microchips have made computer power available to almost everybody. It is the purpose of this course to examine the uses and misuses of computers, as well as the benefits and problems of their application.

Anthropology: Introduction

This is an introduction to a cross-cultural study of man's behaviour ranging from the way he bears and raises children to the way he perceives and handles death. Societies as diverse as the jungle people of the Amazon and the penthouse dwellers of a metropolis will be studied to compare and contrast their views of key questions. What is normality? What is natural? Is aggression innate? Are gods necessary?

Art of the Western World

Think of this course as a "visit" to the major museums and sites of the visual art of Europe and North America. We will compare the art of different countries, past and present, looking for both differences and similarities. We will look at, read and think about such art as Michelangelo's "David" and Paul Cezanne's innovative canvases. While the aim of the course is to give you an overview of not only western art, but of the cultures from which it originated, the emphasis will be on the art of the last 100 years.

Canadians: A New Look at the Canadian People

This course will provide a new and different approach to Canadian Studies. It will cover not only the history and sociology of the Canadian people (much of which will surprise those who have studied Canada before) but will deal also with the struggles of the Canadian people, our literary efforts to be heard, our music and art, our films, our sports and the ideas and values we have built up to make Canada a unique nation.

Children's Literature

The student who is interested in children and what they read, or have read to them will gain a detailed understanding of the multi-faceted world of children's literature. Books which appeal to early childhood, the primary school child and the young adolescent will be discussed. The form, content and illustrations of picture books, fairy tales, folk tales, myths, fables, legends, fantasy, poetry and realistic fiction will be examined from a critical point of view. Specific emphasis will be placed on how to select and use books practically and creatively with children.

Computers and Society

This introductory course examines the uses of computers, both real and projected, and their influences on society. After a brief overview of basic computer concepts, including hardware, programs and languages; the course will focus on the sociological implications of the use of computers in such fields as education, business, transportation, communications, med-

...ence and the home. You will not learn computer programming or data processing but examine applications, social aspect, and possible future directions of computer technology in a variety of fields.

Contemporary Issues

In this course we will examine issues such as abortion, capital punishment, euthanasia, honesty in political, business and personal life, censorship, and women's role in society. We will look at these issues from an ethical point of view, examining the various arguments both for and against each issue. While this course will not yield any absolute answers, it will provoke constructive questioning which will increase your awareness and understanding of the issues.

Conversational French 1 and 2

Learning French as a second language is of great importance not only as a means of communication but also as an aid to understanding the French culture. The courses encourage active participation by the student. Aided by textbooks, video tapes and special pronunciation tapes, students learn French as used in everyday situations.

In French 1, the student acquires basic vocabulary and grammatical skills. It is a course designed for students with no background in French. French 2 develops the fundamentals to more complex structures such as expanded questions and answers in past and future tenses.

Crime and Punishment in Literature

Evil has always been a pervasive part of the human condition. Throughout history, evil often manifests itself in what we call crime. To protect their structure, cultures have been obliged to create laws and to punish those who break the laws. Writers have always been fascinated by this conflict between the individual and society and have tried to capture its essence in imaginative works of literature. Through specific examples of myth and fiction, we will study individuals and groups that seem to have defied the laws of society. We will see some very unusual crimes and some equally unusual punishment.

Detective Novel

Stories of crime and punishment form one of the richest traditions in modern popular literature. This course will offer a brief survey of three distinct varieties of crime fictions—the traditional drawing-room detective story, the gumshoe character study, and the contemporary spy novel—through a selection of six core texts and several film classics. Works by authors such as Doyle, Christie, Chandler, Hammett, Greene, and LeCarre will be examined.

Developmental Psychology

In this course, you will trace human development from conception to death. You will study the physical and the psychological growth of human beings throughout life. Included will be: the interaction of heredity and environment, the brain and its relation to behaviour, age group characteristics and physiological and psychological problems that appear from early childhood through the aging process. You will see how the individual learns to cope and adjust to stress throughout life and how the use of mental health professionals is sometimes sanctioned.

Deviant Behaviour

Various kinds of behaviours in our society have traditionally been classified as "deviant", "wrong" or "immoral". Such behaviours include acts formally declared illegal, controlled by an agency of society (usually the police), and punished by the courts. Other behaviours considered deviant may be informally controlled without resorting to public institutions. We will examine examples of deviance in many areas and explain why these acts are seen as threatening to society. The questions "what is normal", "what is natural", will be explored in our attempt to understand "normalcy" and "deviance".

Effective Speaking

Effective Speaking stresses oral communication because this is the mode by which first and often lasting impressions are created. The job applicant who speaks in a slip-shod manner may very well be judged a lazy, apathetic person. If articulation is poor and grammar is incorrect, the speaker may be considered illiterate and thus opportunities may be limited. In a society in which the effective persuader is richly rewarded and the deficient severely penalized, effective speaking techniques become essential. This course attempts to help students perfect these skills so they can perform efficiently in both vocational and social situations.

Experience of Human Love

This is a study of human love as it is depicted in literature and film. Emphasis will be on the couple's dreams and aspirations, the stumbling blocks that cause them to resort to the games people play and the struggle that leads to the maturing of the ability to love.

Exploring Human Sexuality

This course will encourage the open discussion of human sexuality in a safe, non-threatening environment which will facilitate participation in the free exchange of ideas.

Fantasy and the Subconscious

This is a course for those who are not afraid to delve beneath the surface of things to seek out the profound meanings of life. Through reading and discussion, the student will discover how existence is shaped by myths, fantasies, memories, dreams, metaphors and symbols.

Film and the Arts in Canada

In this inter-disciplinary study of Canada's people—their thoughts and ideas as seen through their traditions, films, art, folklore and literature—the student acquires a perspective on Canada's past, present and future through a study of various themes and issues that have been of interest to the Canadian imagination. Special consideration will be given to how Canadian literature has been influenced by this country's unique geography, wilderness and landscape.

Film—the Grand Illusion

This course is designed for non-film majors who wish to develop a keener critical awareness of the film medium and its impact on the 20th Century culture. The course will examine the history and development of film technique into a unique universal language expressed through moving images, editing and sound. Selected films will be analyzed in class to discover what constitutes a good film. Field trips to local production facilities will

be arranged to give students a better understanding of how films are created.

Folklore - Ritual and Romance

What do rock festivals, April Fool's Day and spring holiday time have in common? Why do we play Noughts and Crosses, Ring Around the Rosie and Mother May I? Why does a father hand out cigars on the birth of a child? These customs, celebrations and games have their roots in folklore. Folktales are among the earliest and most exciting forms of literature; they represent man's early attempts to explore his ideas, fears, desires and customs. In this course the student will explore folk literature, dance, speech and crafts of many ethnic cultures, as well as the methods used by folklore scholars.

Future, The

This course is an attempt to provide the student with current information and views of natural and social scientists, business and industrial experts, and government officials about what the future holds for us. We will explore many fascinating questions as to what life will be by the year 2000.

Great Composers - (From Bach to the Beatles)

This course focuses on the life, time, and style of some of the major figures of the 18th, 19th and 20th Century music. The composers covered include Bach and Beethoven; Tchaikovsky and Wagner; Stravinsky, Brubeck, The Beatles, The Who and Genesis. The course will present biographical and pertinent musical information about these composers.

Great Thinkers, The

The course will introduce students to the major makers of Western thought with some reference to their Eastern counterparts. The students will be given a chart of the great thinkers and a bird's-eye view of their major ideas. The great thinkers will be grouped into the following major movements of Western thought: Spiritualism and Idealism, Materialism, Individualism, the Christian way of life, the purely Scientific and Rational view of life, and Mysticism.

Heroic Fantasy

The world of fantasy provides the reader with an extra facet to expand his mind and push back everyday living. Fantasy provides the reader with a workshop for creative thinking. This course will explore various genres of fantasy, from science fiction to fairy tales. The student will delve into man's need for fantasy literature and the desirability of this need. He will also read and evaluate many of the outstanding books in the fantasy field.

Human Relations

This is a practical course in interpersonal relations. Looking at business, social and personal situations, the course examines: the effects of past experience and learnings on present behaviour, the part that emotions, values, and human needs play in relations; verbal and non-verbal communications; and how people function in small groups. Classroom experiences will be combined with ideas from the behavioural sciences to provide an integrated understanding of human relationships.

International Politics

The aim of the course is to review the politics of nation-states. The peoples of all countries see their own nations as "peace- loving" and their set of national priorities as "just" or correct. But the complexities of international relations make simple slogans untrustworthy and require comprehension of the idealogical, strategic and economic forces which determine politics among nations in the modern era. Topics include the superpowers, detente, military strategy, nuclear warfare and arms control, international security and supra-national organization.

Litérature et modes d'expression Française

Cc cours utilise des textes canadiens-français et français pour illustrer les différences de langage. Vous devez avoir une bonne compréhension du français pour réussir ce cours.

Literature For the '80's

The process of growing up in Canada encompasses several themes. Through a consideration of different Canadian writings you will study and discuss these themes. You will learn about man in conflict with himself, nature, and his fellow-man. Regionalism (East vs. West, rural vs. urban, English vs French, and minority culture vs. majority culture) will be discussed as it is presented in the selection of writings. A special consideration will be the relationship between the past, the present, and the future.

Logic

This course will help the student to develop correct thinking patterns and to distinguish good arguments from bad ones. By studying the laws and principles of logic the student will learn the differences between arguments that actually prove what they are supposed to prove and those that do not. The main objectives of the course are to familiarize the student with the rules and standards of sound reasoning, without which meaningful communication is impossible.

Macro Economics

Economics examines the distribution of scarce resources among competing groups. This course in Macro Economics focuses on national income, inflation and unemployment.

Magazines as Literature

Concentrating on the current international field of quality journalism, the course centres around the American and British elite, the best journalism available in all areas – politics, entertainment, fashion, sports, and human interest. Other aspects of the press will be discussed: layout, design, and photography. The popular press (Time, Newsweek, etc.) and the role of specialty magazines will frequently form a basis for classroom discussion.

Marriage and the Family

The family, no matter how it is structured, is the most basic social institution in all societies. The way it is formed, how it operates, who is considered a member may be factors that differ from one society to another, but all societies expect a family to be responsible for marriage, reproduction, child development, and through the process of procreation, ensure the survival of the society itself. This course will focus on family formation, how it can cope with stresses such as marital discord, child raising, family finances, separation, and divorce.

Man, Gods and Heroes: Myths of Adventure

In this course you will read and discuss ancient and modern myths of adventure. The challenges confronted by great heroes and heroines of all times and cultures touch and illumine our human obsessions with the search for meaning in life and in oneself. You will study the symbolic and personal value of mythology's journey of adventure, the quest for life, as it parallels the human growth process.

Micro Economics

Economics examines the distribution of scarce resources among competing groups. This course in Micro Economics focuses on how prices are established under different market conditions.

Mind Game, The

Tired of being manipulated? Confused by advertising, politicians and media? Want to be able to get to the core of issues? This course will develop your ability to think, to isolate the extraneous and to focus on the information necessary to make a decision. It will teach you to spot fallacies in reasoning, to form your hypothesis and support it, and to straighten out your thinking process . You will understand the mechanism of the mind, techniques of approaching problems and of formulating solutions or opinions, and develop methodology for assessing information.

Moral Conflicts in Modern Society

This course, based on the series, 'The Moral Question', will examine some of the perpetual problems and conflicts that trouble modern man: abortion, capital punishment, censorship, sexual permissiveness, euthanasia, war, etc. Each subject is introduced by a video-tape which dramatizes actual cases, followed by a discussion of the issues involved to examine and clarify the arguments on both sides.

Movie Themes and their Directors

In this course students view popular feature films seriously. We shall examine the work of three outstanding directors. By viewing an early and a recent film of each, we shall try to determine whether or not they have matured in their film-making. The emphasis will be on the themes and statements each of the directors is making, rather than on the technical aspects of the film. (Enrollment limited).

Prerequisite: Basic Communication course.

Music of Man

The student who has an interest in music, but has little or no prior training in music will study the basic terminology, the role of the composer and performer, and various styles of music. Styles will primarily include classical, jazz, and cultural music, with secondary references to popular music and music for film. Awareness and sensitivity to these styles will be developed through comparitive listening and discussion. This course is not available to music majors.

Myth and Mysticism

This course provides an odyssey along the literary pathway of myth, magic, fantasy and mysticism into the realms of the irrational and the unknown. Using the symbols of psychology, mythology and religion as a frame of reference, it will explore the works of revolutionaries of spirit and imagination, the visionaries and mystics such as Franz Kafka, Antoine de Saint Exupery, Hermann Hesse, William Blake, Walt Whitman, William Butler Yeats, Emily Dickinson and John Keats.

Novel and the Film, The

This course examines contemporary novels and the films based on those novels in order to discern how recent writers and film makers view our world. The books and movies cover a wide variety of themes, genres, and techniques, but the selection adequately illustrates the common concern to portray the fundamental characteristics – both admirable and contemptible – of human nature. An analysis and comparison of these works should serve as a basis for understanding various psychological, sociological and philosophical perspectives on today's world.

Parapsychology

This course is designed to give you a general understanding of psychic phenomena—phenomena which do not fit into the conventional framework of psychology. This introduction will cover the history of parapsychology, and such manifestations as telepathy, clairvoyance, precognition, retrocognition and psychokinesis.

People as Consumers: Getting the Most for Your Money

The purpose of this course is to examine the role of the consumer in the traditional buyer-seller-maker relationship. It does so by drawing and integrating concepts from economics, psychology and sociology. Often, consumers feel disadvantaged and powerless when dealing in the marketplace; therefore, while examining the conflict that occurs as business, consumers, government and labour interact, this course will focus on the relative power and position of the consumer.

Philosophy of God & Man

In this course we will study what the greatest thinkers of West and East had to say about the nature and meaning of man (Philosophy of Man), how man relates to man (Ethics and Politics), and how man relates to God both through reason, life experience (Metaphysics) and through religion.

Philosophy: An Introduction

This course will review what the greatest thinkers of East and West have to say on the basic topics of philosophy. We will cover God, man, religion, ethics, politics, logical thinking and truth, and the unknown universe, through lectures, seminars, discussions, films and guest lectures. Each issue will be studied from at least three contrary positions. Themes may be genetic control, women's roles, the rights of children, futurology, the contemporary creative scene, facing sickness and death.

Physical Geography

This course is a study of the geography of the physical world and of the earth as the interaction of systems. Specific topics include the earth-sun system, climate and weather, the water cycle, earth plates and earthquakes, rocks and soils, the physical and biological systems and the science of ecology.

Course Descriptions

Pioneers of Modern Architecture and Design

Through movies, slides and videotapes "Pioneers" explores the roots and growth of today's architecture and design. What is meant by modernity? How was the concept reflected in early Machine Age, last century's Industrial Revolution? With that revolution, traditional design in architecture and artifacts gave way to mass production and the decline of design standards. The romantic early Victorian visionaries, in reaction, dreamed of a new style for this dynamic new age. From William Morris to the Bauhaus came today's ideals of architecture and design. This course, in short, helps the student understand the architecture and design around him by exploring its development in building, furniture and artifacts.

Population and Social Change

What will our world be like in the year 2000? The answer to this question will be greatly influenced by population changes not only in Canada but also in the rest of the world. Fertility rates, death rates and immigration trends in Western Africa, Latin America and Asia affect global population and Canadian society. Rapid population growth creates problems such as food scarcity, poverty and social instability. This course will study Third World demographic trends and Canada's response to population growth. Theories of modernization and social change will also be included in this course.

Professional and Creative Writing

Students will review the various disciplines of writing for radio, television, newspapers, and magazines. To this end, students will examine and analyse news reports, articles, plays and short stories, study the techniques of description, characterization, plotting and dialogue writing. Also, students will study the techniques of professional writing by studying the techniques of master writers.

Psychology 1: Introduction

This course embraces such topics as biofeedback, non-verbal communication, weight control, aggression and violence, environmental influences on sexual behaviour, stress, conformity, ESP, sensory deprivation, advertising (open and subliminal), brainwashing, yoga and transcendental meditation, drugs and altered states of consciousness, hallucinations, and behaviour therapy. Case studies, "action projects", demonstrations and discussions are used to convey psychology's basic discoveries about human behaviour.

Religions of the World

This course will familiarize students with some of the major religions which exert a great influence upon mankind and make them aware of the thought-patterns and significance of the phenomena of religion. The course consists of two parts: (1) A study of basic tenets, beliefs, practices, philosophies and histories of major religions. (2) A critical analysis of general questions relating to religion, such as: existence of God, problem of evil, after-life, religious experience, religion vs. science and philosophy, etc.

Science Fiction – It's Your Future

When Mary Shelly wrote Frankenstein in 1817, it was inconceivable that man would ever be able to reproduce himself artificially; when Alvin Toffler wrote Future Shock in 1970, the technology to build a humanoid was available; in 1978 cloning was an established fact; by 1990 we may all be automata.

This mini-history of the developing scientific imagination will be cloned (duplicated) during the course. Ideas and facts from technology, business, biology, sociology and art will be the starting points for discussion of the stories. We shall try to find the fine line between fact and fiction.

Short Story, The: Classic and Contemporary Short Fiction

You will read, talk and write about short fiction, i.e. stories which can usually be read, understood and appreciated in one sitting. Each story will be dealt with as something which illuminates our own lives as much as presenting the published thoughts of a writer. Though I shall provide a good deal of information on critical approaches and technique, the central focus of the course will remain on the stories themselves and the reader's experience of them.

Social Psychology

This course examines conditioning and desensitization, learning, memory, hypnosis, acupuncture, genetics, types of love, cognitive and emotional development, the purpose of play, personality theory, defense mechanisms, repression, personality testing, abnormal sexual behaviour, mental illness, group therapy, role playing, transactional analysis, persuasion, propaganda, attitude change, applied psychology, and psychology's future. Case studies, action projects, demonstrations and discussions are used to convey psychology's basic discoveries about human behaviour.

Sociology 1

In general terms, sociology is the study of human social or group-behaviour. In this introductory course, students will survey briefly sociology's history and prominent figures. They will investigate sociology's view and interpretation of human social behaviour. The definition of a group, its formation and maintenance, and its establishment of a pecking order will be discussed in terms of contemporary social issues.

Sport and Society

This course examines the social organization of leisure in North American society. Specifically, it analyses human behaviour within the context of sporting and athletic events. It focuses on both individual behaviour and that of groups or teams.

Tales of Terror

Thoreau observed that there is "nothing so much to be feared as fear". Discover how writers evoke and manipulate fear for the dreadful delight of their audiences. Tales of Terror will explore the literary legacy of horror from the Gothic tradition of the 18th century to the contemporary fiction of fright. The development of this theme will be seen through the novel, short story, poetry and film.

Technological Change & Society

This course will help students understand and critically assess the impact of technological change. Emphasis will be placed on the economic and social consequences of new technologies...what jobs/occupations will be needed versus those that will become redundant...what changes will occur in the nature of work – its organization and design. Finally, the course will examine the effect of technological change on society as a whole over the next decade.

Values and Choices

Students will become more acquainted with their own sense of values—the things in life they wouldn't want to live without. The class will also explore what other well-known individuals and societies have valued and what results these beliefs have had on their lifestyles and opportunities. Interpersonal skills and power of observation will be developed during discussions of responses to various art forms (painting, popular song, film and poetry) encountered.

Voices of Comedy

Mark Twain once said that the "secret source of humour itself is not joy, but sorrow". In this course, we shall attempt to apply this premise to various modes of comic expression to determine what it is that makes comedy function and who has become the target of today's best comedy. We shall examine several comic forms: early and later comic films; stand-up monologuists; sitcoms; skits; and satirical essays and novels. The aims of the course are to determine the reason behind the madness of comedy, and to ascertain the place of comedy among other artistic genres.

Why Nations Go To War

In this course you will learn about the political causes of war, the utility and role of war, and generally about the prospects for peace in the nuclear age. We will cover (a) analysis of the First and Second World Wars, the Korean & Vietnam Wars, the Indian- Pakistani & Arab-Israeli Wars and the Persian Gulf and Falklands "War": (b) a comprehensive look at nuclear technology and its military and civilian applications; (c) a review of weapons arsenals of major powers and (d) a comprehensive look at disarmament and arms limitation measures and the obstacles to halting the arms race.

Women & Men in Society

The purpose of this course is to develop an understanding of the function of different roles in society. The focus will be on the differences between the roles of men and women in various societies both historically and in the present. Economics, sociobiological and psychological elements which influence roles are analyzed.

Women in Film and Literature

As the concept of woman changes, it is important to both men and women to examine the choices, problems and challenges that have faced and are facing women. This course will consider works by and about women and will present a wide range of female characters as shown in literature and films. From an explanation of theme, character development, plot, writing style and literary devices, you will come to a better understanding of women in literature.

Applied and Creative Arts

A/V Production 1 - 35mm

This advanced course continues to provide technical and artistic information as well as an opportunity to develop personal skills in the production of audio-visual productions. Special emphasis is given to developing professional work attitudes and image quality and content.

Administrative Management

Highlighting the vocational rehabilitation setting as a business enterprise in all its aspects, students study management styles; budget and costing approaches, public relations and marketing, priority-setting and decision-making; personnel practices; etc. Some consideration will be given to the role of unions in the rehabilitation setting, and to fund-raising and government grants.

Advertising and Promotional Writing

This course will broaden the student's understanding of the role of the professional writer and the many opportunities open to him/her . It will further develop basic writing skills, initiative and creativity, judgment in handling sophisticated writing challenges, and the ability to organize and plan work patterns. Practice will stress such skills as dealing with financial materials, writing selling copy, preparing presentations and selling your recommendations, handling technical information, ghost-writing articles and statements, speech writing, writing for corporations and associations.

Advertising Writing For Public Relations

This course will develop the skills introduced in Introduction to Advertising through practical copy-writing, rough layout, scripting, designing direct mail, scheduling, buying and assessing media. Various promotions will be analyzed. A full campaign, including research, conception, budgeting, scheduling, copy and layout, use of an ad agency and evaluation of campaign will be worked out in detail by the students.

Advertising 1

This course will introduce the student to the general theories of advertising and marketing; explain the requirements of various advertising organizations and how they work; the mechanics of dealing with them for the commercial artist.

Advertising 2

This continuation of Advertising for Graphics 1 applies the principles learned in that course to an advanced level and will combine theory and practice with the specific projects the student is undertaking in graphic design classes.

Analysis for Design 1 and 2

This course will analyse the theories of 2 & 3 dimensional design in chronological order from the Classical period up to the modern day. The motivation behind the uses of geometric, organic and associative styles in design and their application to the theatre, will be discussed, as well as the psychological effects of these styles.

Slide lectures, discussion groups and movies will constitute the methods of instruction. Students will be expected to maintain a portfolio of design throughout the program.

Anatomy and Physiology 1

In this study of the skeletal system, arthrology, and the blood and blood forming organs, many common unsoundnesses will be covered with respect to their location, cause and treatment. In addition, three body systems will be studied: the nervous, common intermentary and urogenital. The various ailments affecting these systems will be studies with emphasis on recognition, treatment and prevention.

Anatomy and Physiology 2

In this study of the structure and function of the digestive and cardiovascular systems, students will gain a greater understanding of the various ailments affecting these systems, with emphasis on prevention, identification and treatment. This course also involves the study of the structures and functions of three other body systems: respiratory, opthalmic and muscular. The various abnormal states of these systems will be examined with an emphasis placed upon the understanding of the pathology and associated treatment.

Announcing Techniques 1

The student will learn the fundamentals of announcing procedures as practiced in Canada, covering the personality program, news and sports announcing and interview shows.

Announcing Techniques 2

This part of the announcing course will place heavy emphasis on the personality part of radio, that is the announcing technique used in recorded and live musical programs.

Announcing Techniques 3

This course is a continuation of 477-202. This time the announcing of remote and outside programs will be taught in depth.

Applied Botany

Students will learn the fundamentals of plants and plant growth, study all functioning parts of plants, their reaction to environment and the practical application of cycles and energy flow through ecosystems as they relate to the landscape industry.

Applied Botany & Plant Identification

This is a study of commonly sold indoor plants, their anatomy and the relationship between plants and those exterior components which affect their growth (soils, insects, light and other conditions). Students will learn the common and botanic names of each plan discussed.

Applied Soils

A study of Southern Ontario soils in horticultural, ecological, engineering, geogrphical and chemical terms, stressing the relationship between theory and common trade practices involved in the landscape use of soils.

Arboriculture 1 and 2

This course covers the topics of nursery site selection, layout, development, maintenance and management. Deciduous and coniferous trees and shrubs will be considered under the headings of transplanting, storage, transporting and nursery specifications.

Area Layout and Design 1

This course will introduce the student to the basic design principles and planning factors related to ski resort development. It will also develop an awareness of the various procedures necessary to create a resort complex.

Area Layout and Design 2

This course further develops the basic design principles and planning factor related to ski resort development.

Arena Construction, Design and Maintenance

Students learn the architectural designs and construction of arenas including technical set-ups and how the maintenance should be carried out in an arena with regard to mechanical equipment, building and structural maintenance.

Art History 1 and 2

A survey of art, architecture and the minor arts from early civilizations to the Renaissance period in Southern and Northern Europe, this course will trace the development of Western man as demonstrated in visual forms and will establish the relationship between permanent art forms such as architecture and architectural sculpture, fresco painting and furniture design, and the "portable art forms" such as pottery, textiles, easel painting and applied arts.

Arts

This course teaches effective production techniques that can be applied to broadcastingin Canada. It will examine, in part, radio programming.

AV Applied Physics

Students will review the basic physical theories of light as related to audio-visual equipment, specifically lenses, mirrors and prisms. The course will also deal with sound and sound reproduction theory and applications. Emphasis will be on evaluating the design of audio equipment to provide adequate acoustical levels and correct acoustic dispersion in halls and auditoria.

AV Electronics 1

This course will provide the Technical Option student with a basic understanding of series and parallel, direct and alternating current circuits. The student will become familiar with the functions of various electronic components, testing instruments and trouble-shooting methods. The course will have alternating lecture/laboratory periods.

AV Electronics 2

This course provides the student with a working knowledge of the electronic components used in audio-visual systems. The student will be able to recognize specific design features, to diagnose common component faults and repair them. The student will be expected to make any necessary adjustments and set up preventative maintenance procedures to keep the equipment in good working order.

AV Electronics 3

This course is a continuation of the objectives in AV Electronics 2 with emphasis on video equipment and systems.

AV Mathematics

This is a refresher course to provide the basic technical mathematics for the AV Applied Physics and AV Electronics courses.

AV Media Applications, Introduction

Students will learn the operation, application and presentation of information on conventional audio-visual equipment, will produce basic audio-visual materials and start to assemble them into a portfolio.

AV Production Workshop, Sponsored Projects

The student will have the opportunity to work with clients, sponsors and/or educators who need specific audio-visual instructional resources or promotional presentations. Each student will work with an assigned consultant (client) who will use the audio-visual project which the student will produce during this term. The student and consultant will meet on a regular weekly schedule to plan and develop the AV software for the consultant.

AV Techniques For Public Relations

This introduction to the use of audio-visual materials production and techniques incorporates the various methods of photo reproduction, the use of cameras and darkroom practices.

Basic Black and White Photography

Students without previous photographic experience will go through the photographic sequence to be able to make a photographic record of the images around them. Students will become familiar with the theoretical and practical aspects of the camera, the darkroom and the workroom, so that they can apply training in their major program.

Basic Horse Health 1

This course will deal with common health problems of the horse. Based upon initial discussion of the healthy horse, emphasis will be placed on common injuries and treatment using practical first aid. The other major area of emphasis in this course will be common diseases of the major body systems, their symptoms and appropriate treatment.

Basic Horse Health 2

This course will involve the basic study of conformation as it relates to unsoundnesses. Contents of the medicine cabinet, identification of lameness problems and lameness care and therapy will also be discussed.

Basic Nutrition

In this course, students will become familiar with common horse feeds, horse feed terminology, the use of commercial products and the common rules of good feeding. Emphasis will be placed on practicality and feeding economically.

Basic Ticketing

The student learns the skills essential to ensure the accuracy demanded by the Bank Settlement Plan and scheduled airlines, related to the issuance of air travel documents.

Breaking, Training and Conditioning

Students will work with unbroken two-year old Thoroughbreds, taking them through a progressive system of breaking and training. In the second half of the semester, unbroken grade horses will be used. The various psychological, theoretical and practical aspects of training and conditioning will be studied. Young horses will also be taught to load.

Broadcast Techniques

This general discussion course is composed of topics relating to new and everyday developments in the broadcasting industry.

Broadcast, Research and Marketing 1 and 2

The science of buying time in the radio industry in Canada is becoming a more complex game as the years pass by. This course will deal with ratings and how they operate in both the programming and buying ends of the business part of radio.

Carpentry 1

This course provides a practical introduction to stage carpentry. The use of hand and power tools will be examined and the basic stage units – plates, frames, risers and stair units will be built. In addition the student will learn how to work safely, use the shop and read drawings.

Case Studies 2

Students will continue to work on a selection of PR case histories covering a variety of situations and conditions. When feasible, guest lecturers will describe an actual case history.

Cinematography – 16mm

This course provides students with the theoretical and artistic knowledge as well as the practical skills required to complete a series of multi-discipline assignments of increasing technical difficulty. This will be accomplished through illustrated lectures, lighting and camera equipment demonstrations and workshops. Technical and artistic image quality is emphasized.

Coaching Awareness Theory 1 and 2

This course will comprise weekly one-hour discussion sessions covering such topics as horse and rider turnout for the exam, oral preparation, current equine publications, familiarization with the rule book, longing and long lining techniques, course walking and distances as well as uses and application of specialized equipment.

Colour Theory

This is an introduction to the various colour theories and terminology upon which colour systems are based and are used in the Visual Arts. This involves both theoretical learning and practical application. Students will be required to attend the National Design Show in early November.

Communications Theory

Canada has produced two of the world's great communication theorists, Harold Innis and Marshall McLuhan, plus a mixed private-public broadcasting system in two languages. In this course, the basic ideas of these two writers and their followers will be examined and discussed. The course will follow a seminar format, with student presentations weekly.

Computer Animation/Videotex

Students will adapt various video image creation methods and text design systems to motion. The basic principles of visual animation will be introduced and modified to take into account the production techniques employed on microcomputers. Upon completion of this course, students will be able to create and produce se-

quential images which would result in animated effects. Students will become familiar with the Telidon system. They will assemble and edit their portfolio of computer-created images on video tape.

Computer Basic, Introduction

Using microcomputer systems to support communication processes, students obtain hands-on programming experience in Basic. At the end of this course they will study creating simple graphics and will be able to describe the major functions and applications of data processing systems.

Computer Concepts

This course will provide the student with computer literacy, skills, and knowledge required to function effectively in a computerized- reservations environment, operate both Cathode Ray Display Terminals (CRTS) and printer terminals on the systems of airlines and tour operators.

Computer Design

Students will explore the various applications of the computer in the creation of text and visuals to support audio-visual communication processes. Through exercises and projects to gain experience in using videotex hardware and software based on Telidon standards, students will be able to create and produce text, chart, graph, cartoon and freehand visuals. Students will store their visuals, recall them for modification, update and finalize them for an audio-visual presentation.

Computer-Controlled AV Equipment

Students will learn to program and operate a variety of random access and computerized audio-visual equipment and related production processes. They will produce projects that require an analysis of the appropriateness of the medium in relation to the project's communication objective.

Computers in Design

An introduction to the use of computer technology in Industrial Design. Computer aided design theory and hands-on practice are included.

Concessions 1

This comprehensive study of the various concessions within the arena structure, includes the processes involved in operation of such facilities and planning.

Cosmetic and Beauty Industry

A detailed study of cosmetic application techniques used in fashion photography, stage production and television films and coordinating hair styles (current and period) will be in the core of this course. Students will study the relationship between various types of lighting and film used for cosmetic applications.

Cosmetic Theory and Practice 1

Students will review an analytical study of cosmetic ingredients to understand various government controls, be sensitized to current trends in product use and application techniques and learn modern methods of applying cosmetics on clients for corrective make-up. Cosmetic firms, their marketing policies and staff training methods will be outlined. Finally, diet, weight control and basic nutriti on will be discussed to help students understand the relationship between fitness and beauty.

Cosmetic Theory and Practice 2

Application techniques for fashion photography and stage will be included in this course together with demonstrations of how make-up is applied on oriental, dark and fair skins for photography, fashion shows and every day. Skin-care, nail-care, hair-care products are studied to examine their ingredients and how they function. Practical work will include make-up demonstrations on clients. Field trips are also scheduled.

Costume 1

This is an introductory course in costume history and the basic elements of costume construction. Students develop a sense of coordination of costumes with set and light design.

Criminal Legislation 1

Students study the procedural criminal law and application. Emphasis will be placed on the legitimate use of force, powers of arrest, search and seizure, compelling the appearance of both the accursed and witnesses. Bail procedures and prerelease of offenders will be discussed in detail.

Criminalistics 1

The course will provide the student with basic knowledge and skills in the following areas of police expertise: the science of fingerprints; evidence - its collection, preservation, continuity, and significance; handwriting.

Critique 1

In this detailed study of the results of the student weekly publication COVEN, students will analyse in detail all aspects of the publication, paying particular attention to the overall effects of layout and design, choice of story position, effectiveness of headlines and accuracy of content.

Design Applications

As a follow-up to elements of design, this course is a study of the ways in which various elements and principles of design are applied to actual products. Through the study of case histories, product analyses and design surveys, the students become familiar with a wide variety of influences which effect the design process.

Design Futures

A continuation and development of elements of Design and Design Applications, this course deals specifically with those influences which have an impact on future design developments.

Design Graphics

This course will study the nature of graphic influences on industrial design. The origins of graphics, typography and reprographic processes will be related to actual use in the design and production of symbols, signage, packaging, displays, publications and product identification.

Design Presentations 1 (Drawing Fundamentals)

This is a course structured to develop drawing, sketching, and basic rendering skills and techniques used for communicating design concepts, recording visual material and illustrating ideas and variations. Emphasis is placed on developing basic perceptual skills to encourage fluency in applied drawing skills and perspective theories.

Design Presentations 2

This course is a continuation of Design Presentations 1 in which more advanced principles of perspective are introduced along with a wide variety of media and drawing/rendering techniques.

Design Presentations 3

A continuation and development of Design Presentations 2, this course emphasizes media, materials and methods used for visually communicating and presenting design information at various stages in the design process.

Design Presentations 4

This is a course in advanced studio methods for Industrial Designers. Basic photographic theories are introduced and camera/lighting techniques are taught. Related presentation techniques used in advertising, display, promotion and product service fields are introduced.

Design Theory 1

This course explores the basic tenets and theories of design aiming at the university of design. It is run in conjunction with Interior Design 1.

Design 1

Studies in line, tone and colour of texture, values and schemes will be applied to spatial concepts in the abstract. In conjunction with research work these are applied to specific advertising design graphics. In the execution of projects, you are introduced to the various art media; terpera, water colour and line, as well as combined techniques.

Destination I.A.T.A. Area 2

Destinations is based on student-directed study and research of I.A.T.A. Area 2. Classes will require group and individual research. The available information includes printed material, computer aids, current travel books, and other travel literature.

Destination Travel Geography

Students will be personally responsible for their own progress in study and research, so as to be prepared for tests on stated material by certain dates. Classes will require group and individual research. The available information includes printed material, current travel guides, atlases, etc. The student, at the end of the course, will know the geographic location of all important countries and cities in the world.

Direction 1

In this introduction to the work of the film and television director, with emphasis on short films and TV productions, students will learn about the work and responsibilities of the director and the need for extremely close cooperation with the producer, production manager, performers, and all other people involved in production. Students will prepare and direct several projects, including all the assignments of the Super-8 Film Production Workshop, and will be expected to arrange shooting schedules and film shoots with other members of the production crew. This course is directly related to Scripting 1, Super-8 Film Production Workshop 1, and Communication 1.

Documentary Film Styles 1

This course examines the high degree of professionalism and creativity required to produce documentary films. The student is introduced to many films of the genre and to the history and development of documentary films to the present time. Many films will be screened so that the student will understand and appreciate the different visual and other creative concepts used in this medium.

Drafting and Detailing 1 and 2 (Graphic)

Students will be introduced to drawing as a form of communication and taught the techniques and skills required for sketching and drafting information. Basic construction, lettering, line technique, plan, elevation, section, isometric, oblique sketching and perspective are the standard techniques to learn graphic communication.

Drawing 1

Drawing 1 is a highly practical course in which instructors briefly review some theories. By drawing, the students will then have the opportunity to demonstrate their understanding of these theories. The course will demand a high proportion of work done in the student's own time and sketch books will be examined on a continuous basis.

Ear Training 1

Ear Training 1 is an introductory course designed to develop the necessary fundamental aural skills for record copying, improvisation, arranging, the "faking" of tunes, sight singing, and musical composition.

Ear Training 2

Ear Training 2, which will continue to develop aural skills, introduces lifting techniques, part singing, silent dictation, tonicization, turnarounds, nondiatonic modes, and spread voicings. Aural recognition of topics covered in Theory 1 and 2 will be stressed when appropriate.

Editorials/Reviews/Copy Editing

This is a study of the roles of feature writing and editing in newspapers with emphasis on the practical aspects of these functions. Students will develop feature ideas, do the necessary research and interviewing, and write comprehensive newspaper features. They will also copy edit and write headlines for newspaper news and feature articles.

Effective Speech 1

This course will introduce the student to effective speech communication. Oral communication theory and technique will be brought out and confirmed through student participation. Grammar, inflection and tone will be included in the assessment of student presentations.

Effective Speech 2

This course will further develop effective speech through the teaching and practice of good oral communication techniques.

Elements of Design

An introductory course in the basic concepts and elements which are used in the design process with special emphasis on those elements which most strongly relate to a 3-dimensional design.

Elements of Design 1& 2

These courses will provide the photography student with a sound understanding of all aspects of composition and design. The student will develop a visual awareness for the principles of good design and an understanding of the importance of their function in the

photographic world. With the information acquired through theory and during practical projects, the student will become proficient in this important area of photography.

Elements of Fund-Raising

This course covers the growth of philanthropic movements, their organization; volunteer motivation; objectives, methods and techniques of fundraising; and examination of case histories.

Ensemble 1 to 4

Ensemble is designed to give all students a daily warm-up physically and vocally before they begin the day's activities. Divided between the disciplines of voice and movement, the warm up will be supervised by the instructors of voice and movement. This will not be so much a teaching time, though problems may be treated in this period, as a chance to warm up and leave the teaching periods clear for more comprehensive activities within each discipline.

Ensembles – Improvisation

A performance and study course focusing on developing the students' capabilities in small group performance situations. Instructors place students in ensembles performing at their proficiency level to get the opportunity to apply material learned in a weekly lecture. The ensembles offered are: Big Band, Small Ensembles/Concert Band, Small Groups, Vocal Ensemble.

Equestrian Skills 1 and 2

This intensive riding program, both on the flat and over fences, prepares both horse and rider to meet the requirements of the levels 1 and 2 equestrial coaching certificate. Correct body position, effective use of aids, longitudinal and lateral schooling of the horse, gymnastic jumping, course work, cross-country jumping, the psychology of training will be the major areas of concentration. The ultimate objective is the development of stylish, effective riders both on the flat and over fences.

Equestrian Skills 1 and 2 (Coaches)

This intensive riding program, both on the flat and over fences, prepares both horse and rider to meet the requirements of the Levels 1 and 2 equestrian coaching certificate. Correct body position, effective use of aids, longitudinal and lateral schooling of the horse, gymnastic jumping, course work, cross-country jumping, the psychology of training will be the major areas of concentration. The objective is the development of stylish, effective riding both on the flat and over fences.

Equestrian Sports Psychology

This course is an introduction to the principles and concepts of motor learning and their application to the teaching of equestrian skills. You will study the distinction between learning and performance, the classification of motor skills, the learner and the environment. Equestrian skills will be analyzed and this analysis used as a basis for developing teaching techniques.

Equine Exercise Physiology

This course will teach you "how the animal works as a biological machine". It includes studies at the cellular, tissue and body systems level. Selected aspects of equine function and horse performance will also be covered. Muscle function and the dependence of muscle on other body systems to maintain function during exercise will constitute the main theme of the course. Other topics include such components as biological adaption, dimensional aspects of function, energy metabolism and nutrition.

Facility Management 1 and 2

This course will develop the student's managerial abilities in the areas of personnel supervision, inventory control; ordering feed; tractor maintenance, repair and driving; jump design and building; paddock building and repair; maintenance and upkeep of records, and many other skills required in the management and operation of a facility.

Facility Operations 1 and 2

Students will learn and practice the day-to-day skills that are used in the horse industry. Paddock construction, jump building and repair, tractor driving and maintenance, inventory control, arena harrowing, stall maintenance and repairs and other skills will be covered.

Fashion Industry Careers

In this geographical study of all areas commercially important to students of fashion and related careers, students will go on field trips individually and in groups to specific locations where fashion events are held. Travel will be by bus, car pools or public transportation.

Fashion Modelling Industry 2

This study of the various career opportunities a model can expect to encounter in the fashion industry will review employment trends, opportunities and expectations of each specific organization will be detailed.

Fashion Photography Modelling

Students will be taught to work in front of the camera as a photographic model. Instruction includes photographic categories such as sportswear, dresses, beachwear, formal wear, fashion accessories and magazine covers. Students will be shown how to coordinate hairstyles, make-up and accessories to complement the garment being photographed.

Fashion Show Production 2

Using skills learned in General Fashion Show Production 1, students will produce a major fashion presentation. Areas of study will include promotion, backstage management, set and stage layout, selection and coordination of merchandise, model selection, commentary, and lighting and sound considerations.

Fashion Show Techniques 2

This course will include advanced performance in runway and stage techniques including dance steps and choreography. Voice training for TV and film will be an integral part of this course as well as practical involvement in fashion shows and screen performances.

Fashion Stylist Photography

Through a series of projects students develop skills in fashion coordination for photography and other forms of fashion promotions. Fashion trends, garment selection, choice of make-up, costing of studio and on-location photography, and layout composition are included.

Field Orientation 4

A study of the administration, maintenance and programs in the various types of arenas under actual conditions, supplements other courses in the program by emphasizing the practicability of various functions.

Field Practice 1, 2, 3 and 4

Students pursue an interest area with the ultimate result to assist in obtaining full-time employment in the recreation field. Students take full responsibility in designing a proposal, implementing, documenting and evaluating the field work experience in cooperation with agency or resource personnel. In the first semester only, all students do not require practical agency work, but must successfully complete aclassroom orientation requirements to continue.

Field Work Orientation 1 and 2

Emphasis will be on practical learning with supervision. Students will work in a variety of areas related to career employment. Since all work is performed after an audition, the type of work a student will be selected for will dictate future employment suitabilities.

The two semesters are a natural combination of each other with various aspects of fashion show involvement predominating in Semester 1. In Semester 2, students will work in their respective options and field of specialization.

Film and Television Production Workshop 1

The student learns actual "hands-on" production techniques in smaller production units on a three-week rotation. Each part of the class will spend every third week learning film camera and lighting, television technical operations and production techniques and Film/TV Direction Techniques. At times, team teaching is involved.

Film and TV Direction 1

This course develops directorial skills and deals with particular problems associated with specific types of Film/TV programs of news, current affairs, documentaries and specialized event formats.

Film and TV Program Formats 1

The course examines the internal structure and style of a variety of Film/TV program formats, through screenings of sample productions , lectures, and discussions. The course is closely related to script writing and direction courses, servicing both of them.

First Aid and Accident Prevention

This course will teach the student practical skills based on first aid principles and standardized procedures related to emergency treatment of persons in accident situations. Consideration will be given to causes and prevention of accidents and accidental injuries. Upon successful completion of the course, the student will be awarded the St. John Ambulance Standard First Aid Certificate.

Floral Design Lab 1

To design flowers and trim accessories for sale in a retail flower shop, students learn the special treatment of flowers for weddings and special events, colour combinations, pricing and packaging of the designs created by the retail florist.

Floral Design Lab 2

Students will cover basic and practical methods of creating all phases of floral designs: styled arrangements, dried floral materials, corsages, bridal flowers, funeral tributes, table settings, as well as the accessories that have to be made up to trim or complete a given arrangement.

Flower Shop Seminar 1, 2, 3 and 4

The flower shop seminar course will be set up as a half-hour discussion on the different phases of the operation and set-up of the retail flower shop. The balance of course time will be in the actual operation of the Humber College Flower Shop where the student will be fully acquainted with the complete operation of the retail florist outlet.

Freehand Drawing 1 and 2

This is an introduction to freehand drawing using objects both organic and man-made as well as the human figure; at the same time it will explore the essential areas of two-dimensional design, form, line, shape, mass and tone to communicate visually ideas, concepts, thoughts and feelings.

Functional Keyboard 1 and 2

This course helps the student acquire keyboard skills in applied theory (harmonic structures, chord/scale concept, scales, chord progression) and basic "legit" reading. It also introduces the principles of keyboard improvisation.

Fundamentals of Reporting

This course will lay the foundations for all news writing and reporting for all media. Heavy emphasis will be placed on analytical thinking in terms of news values and on the development of a clear, concise, and readable style of writing.

Garden Centre Operation

This course will familiarize the student with the diverse operations of a garden centre. Topics include planning, personnel, pricing, location, merchandising, displays, advertising, maintenance of stock, customer relations, credit and financing.

General Fashion Industry 1

An awareness of the development of fashion trends is the basis for maintaining and developing authority in the field. Students gain this professional approach through visits to industry, discussion with guest speakers in various fields of fashion and study of current fashion events.

General Fashion Show Production 1

Students will learn to organize fashion shows from the beginning to a polished professional show finale. Involvement in auditions, model selection, stage and set design, press and media liaison, fashion commentary (written and spoken), wardrobe coordination and fittings, music selection, choreography and timing techniques will give sound experience. Shows will be produced during the year but one major fashion show per semester, held in a public area such as a shopping mall, will be the focus.

General Fashion Show Techniques 1

Students will be trained in fashion show techniques employed by fashion models for various categories of garment showings including formal modelling, runway productions, showroom and television modeling.

Emphasis will be placed on total fashion coordination and students will be required to coordinate hairstyles, cosmetics, fashion accessories and undergarments for the required effect. Video taping of practice sessions will occur periodically throughout the year.

Graphics and Animation 1

This course will examine the aesthetics and technical requirements of graphics for film, television and A/V presentations and examine various styles of animation, through illustrated lectures and practical assignments.

Graphics 1

Projects in Graphics 1 relate to reproduction and printing methods. Accented is the production of concepts in layout form, the techniques of creating ideas and translating these into preliminary graphic "roughs". All work is applied to the various advertising media. From the beginning, our objective is to help develop a truly professional, as well as a creative person.

Graphics 2

Conceptual design for the various advertising media generated in Design 2 is converted to layout and reproduction art in Graphics 2. A repeated sequence of these projects is related to reproduction methods review. Work will progress through line, half-tone to four-colour process art technology.

Guest Speakers 1

Each week, speakers from the radio industry are invited to speak about their fields of expertise. This course is common for all three years of radio students.

History of Art 1

This is a review of art forms of Western man from the early civilizations to the end of the eighteenth century. This course will emphasize the three-dimensional aspects of art and trace the development of human effort to give visual form to problems of proportion, environment, religious and philosophical beliefs, within the limitations of the geographical, economic and cultural background. The Industrial Revolution and its effects will be covered in the second semester of this course.

History of Industrial Design

A study of the historical foundations of Furniture and Industrial Design. Visual references are combined with studies of the origins of styles, forces of change, development of skills and technology, and potential uses of historical resources.

History of Packaging 1

This course should prepare the student to consider the package and identification of packaging as an integral unit in harmony with its concents, means of distribution and consumer marketing and methods of the twentieth century. The student will be given a chronological history of the development of packaging philosophy and be expected to make presentations in class.

Horse Industry 1 and 2

The history, development, and aims of many segments within the multifaceted horse industry will be presented through guest lecturers, field trips, films and demonstrations. In addition, students will be kept up-to-date on current events in all areas of the industry. Employment opportunities for graduates will be discussed.

Human Growth and Development

In this study of human growth and development patterns from conception to old age, social, emotional, intellectual and physical aspects of each development stage will be examined.

Industrial Design 1

This course is a development of a practical understanding of structure and forces prior to initial work in product design. Individual and group critique are combined with exploratory assignments to investigate the theoretical and practical elements of materials, structural forms, problem descriptions and analysis. Introduction, practice and development of problem-solving techniques are combined with the growth of effective visual communications through sketching, drawing, drafting and scale models.

Industrial Design 2

This course is a development of products to the prototype stage: a continuation and implementation of Industrial Design 1, with practice and further development of basic studio and shop skills required to proceed with advanced work. Emphasis is placed upon suitable levels of craftsmanship, use of materials and processes, form development and market applications.

Instructional Theory

This course will prepare the student for practical involvement when teaching riding. The student will learn the theory of teaching, the methods of organizing lesson plans, dealing with different personalities and coping with possible problems that might occur during a lesson.

Interior Basics

This is an introduction to contemporary architecture as human anatomy sizes, furniture sizes, shapes and practical application; character and mood of shapes; textures; lighting (natural and artificial) planning and zoning for human needs.

Interior Design 1

This is the study of the elements and principles of two and three-dimensional design and their application to solving abstract and functional problems in space. The course consists of weekly class lectures and lab assignments based on the lectures.

Interior Design 2

This is an introduction to the solving of actual interior design problems. This course involves the beginning of synthesizing previous information and applying it in a practical way to problematic situations.

Intro to TV Production 1

Students will learn the basic operating and production techniques for television. Starting with the single-camera video-recording system, students will progress to the multiple-camera facility of the basic television studio. At the same time they will learn how to research, develop, crew and direct simple television production.

Introduction to Advertising

This is an introduction to advertising media and priorities for Public Relations.

Introduction to Law

This course will familiarize the student with our legal system as a whole. The course will focus on the definition

of law, its elements and role in a democratic society, the form of our government, the history of English Law, The Constitution Act, the elaboration of Federal and Provincial Legislation, the concept of civil liberties, and the fundamentals of natural justice.

Introduction to PR and Case Studies

This course will examine the history and trends, principles and practice of the art and craft of Public Relations (definitions, concepts, relation to publicity) and will relate these themes to case histories.

Introduction to Radio

The objective is to give the student a complete understanding of the history, the role, the organization, the legal aspects, music content and news and sports policies of radio stations in Canada. The course will also present the differences between private and public broadcasting in the nation.

Introduction to Radio (Public Relations)

To acquaint PR students with radio and how they can use it in their profession, they will study its history, tools and techniques, style of writing and understand production requirements.

Introduction to Radio 2

An examination of the difference between stations using sample tapes and guest speakers representing different functions in radio will be the highlight of this program. The student will also learn the operation theory of radio stations.

Introduction to Recreation and Leisure Services

This course will define recreation and trace its historical development with particular emphasis on Ontario. Students will become knowledgeable of various legislative acts affecting recreation in Ontario and study in detail the committee and staff structures governing municipal recreation.

Program activities by season, age group, and sex will be studied with particular emphasis on the activities and staffing, and organizational procedures for a year-round activity program. A detailed survey of the minor sport program organization at the community, provincial and national levels will be conducted with particular emphasis on philosophy and operation.

Introduction to the Florist Industry

Students cover the field of history regarding the formation of wire service organizations and their structure in the retail flower shop. The students will be exposed to the methods of delivery operation and set-up of floral products in the funeral home and hospitals. Floral delivery and sending and receiving out-of-area orders will be studied.

Jazz History/American Popular Music 1

This course is a study of the many different musical styles which emerged from New Orleans after the American Civil War. The spirituals, blues, ragtime, stride, traditional New Orleans genre, dixieland, swing, and bebop which emerged between 1850 and 1950 will be examined both musically and socialogically. Emphasis will be placed on the historical development and the musicians and musical elements which fostered and typified each of the jazz styles.

Jazz History/American Popular Music 2

This course is the study of the various Jazz styles which emerged from 1950 to the present. Emphasis will be placed on the development of the musicians, and the musical elements which fostered and typified each of these styles.

Journalism Seminar

The student will research the assigned topic and submit questions for discussion in class. The following week the specialist in that field will conduct the seminar with a discussion period. Students must demonstrate professional research ability and a clear line of reasoning in questions and comments, and be able to summarize and report their findings.

Landscape Drawing 1 and 2

The course will develop the student's ability in graphic communication skills and an understanding of how landscape design relates to the landscape industry. The fall semester shall concentrate on the student's ability to express himself graphically. The winter semester shall aim to develop and refine this graphic self-expression in terms of landscape drawing and design.

Layout and Production For Print 1

Students discover the relationship between the Public Relations consultant and the Graphic Designer. The course introduces basic design principles; logo styles and corporate imagery; basic typography and the psychology of colour and shape.

Layout and Production For Print 2

This course will describe the skills required by a public relations practitioner involved in the publishing of corporate internal and external publications and working with other print media.

Leadership and Group Dynamics

This study of the principles of leadership and effective working with groups will include the theories in current use and their application. The course also provides an opportunity to practice and develop basic communication skills and experiment with different styles of group leadership. The fundamentals of parliamentary procedure and the preparation of constitutions and by-laws of organizations will be explored through an experiential approach.

Leisure Programming 1

This is an introductory course with two distinct components. Each student will learn program planning, implementation and evaluation. In addition, each student will have an opportunity to acquire a St. John's Ambulance Standard First Aid Certificate (or equivalent) and a wilderness Emergency Care Certificate.

Leisure Programming 2

This course will examine the basics of marketing as applied to recreation; focus upon the acquisition of winter outdoor skills through a residential seminar; and provide the opportunity for students to acquire the Cardiovascular Pulmonary Resuscitation Basic Rescuer Award and the Emergency Skills Certificate. In addition, all students will actively participate in presenting a variety of recreation activities.

Lighting Technology 1

This detailed course in the use of the lighting instrument will begin with elementary electricity, the physics of light and end with the instrument itself and its uses. Emphasis will be placed on the practical.

Magazine Writing 1

This course will consider the skills required for writing and editing for general, business, professional, corporate and government publications.

Magazine Writing 2

Students will research and write articles for in-class magazines covering general, business and corporate fields.

Students will be expected to initiate, plan, research, write and edit actual in-class magazines, choosing their own reader audiences and magazine titles. This lab will coincide with Magazine Layout and Design.

Major Instrument

This is a continuous six-semester course comprised of 1/2 hour private lessons each week to develop the playing potential of the student on a personal basis; guide the student through problem areas; instill a thorough understanding of production methods and techniques; develop the student's personal sensations and growth formula to attain a higher awareness and displaying level. This course is complemented by Major Instrument Workshops which use lectures, labs, private lessons among instructional methods.

Marketing Communications

The student will perform a wide variety of tasks in public relations, advertising, marketing and communications for a ski area operation. The students can expect to spend time on the basic principles involved in creative development of communication and market strategy as well as the selection and preparation of copy, photographs, layout and editorial copy.

Marketing Design Objectives 1

This course exposes the student to the general principles of marketing as they apply to the production of consumer goods, to printing for package materials and to the designer or design studio.

Materials & Processes 1

This is an intensive course in materials & processes for Industrial Design. The study of physical properties of materials and processes by which they are formed will include practical exercises in forming and joining metals. There will be field trips to a variety of industrial fabricators to reinforce individual course topics.

Materials & Processes 2

A continuation of Materials & Processes 1 with emphasis on Plastics & Composites Technologies and applications.

Materials 1

Encyclopedia of finishing materials and their method of application.

Media of Print and Broadcast

This broad study of print and broadcast media in Canada, including daily and community newspapers, magazines and news services, radio and television stations, reviews the philosophy and practices of journalism. The concept of press freedom, ethics and social responsibilities of the media are examined.

Model Making

A model making course for the Industrial Designer using hand tools, power tools, and woodworking machinery to form a variety of materials. Emphasis upon safety and craftsmanship is incorporated in a range of model making activities.

Movement 1

The first step in preparing an actor in terms of movement consists of correct body alignment, strengthening and flexibility exercises leading to an awareness of the body as a vehicle for self-expression.

Movement 2

This course is a continuation of Movement 1. Techniques such as falling, rolling, dragging, etc., will be introduced with some improvisation done using the aforementioned techniques.

Movement 3

This class will include periods of extended activity with periods of relaxation. Each class will begin with general exercises designed to lead participants through a range of movements varying in rhythm and dynamics.

As students increase the range and vocabulary of movement they will develop individual and small group studies where they can expand the physical craft of the actor.

Movement 4

This course will strengthen the skills introduced in Movement 3.

Nature of Crime 2

For approximately 5 weeks this course will concentrate on the typology of crime studies. Factors discussed will include which "wrongs" should be considered "crimes"; the violence of conditions justifying the violence of persons; and other contemporary moral issues.

News Photography 1

This course will develop the skills required to produce and judge a good news photograph. It will concentrate on the skills of photo-journalism.

Newspaper Layout and Design

This course will cover the essentials of newspaper and magazine design and typography through the interaction of type and illustrations. It will deal with layout and design of news and feature pages in tabloid and metro page size newspapers and magazines.

Newspaper Reporting 1

This is the second in a series of basic writing courses designed to develop reporting and writing skills needed in all areas of print journalism. Emphasis is placed on interviewing techniques—gathering information for news stories, feature articles, etc., both in person and by telephone.

Newspaper Reporting 3

This course will develop writing, editing and reporting skills for print journalism. It aims at rounding out the student's ability to handle the basic function of newspaper reporting with a minimum of supervision. The course is linked to Newspaper Reporting 2, in which students will be required to produce weekly copy for the Journalism Department newspaper COVEN. The first portion of the course will review the basics of writing and reporting.

Nutrition 1 (Equine)

Learning the fundamentals of animal nutrition will help you understand feed nutrients, why the horse needs them, where and how he obtains them and how he uses them. Digestive physiology, lab tests to ensure nutrient adequacy and identification of common grain and feed supplements are other subject areas covered.

Nutrition 2 (Equine)

Using the theoretical knowledge of nutrients and nutrient requirements acquired in Nutrition 1, students will now apply this knowledge to ration formulation. Commercial feed products and nutritional diseases and ailments will also be investigated. Pasture management and hay quality will be taught.

Office Procedures (Travel and Tourism)

This course will cover general office procedures in relation to wholesale and retail travel offices, including the necessary skills and techniques for telephone transactions and telephone sales.

Operating and Engineering 1 and 2

Students will learn the essential engineering concepts of the radio studio equipment, from all kinds of microphones to different types of consoles within the structure itself. As well, the concepts of correct operation of the studio will be discussed. Students are expected to understand the various functions of each piece of equipment and the techniques of sound engineering.

Outdoor Education/Recreation

This course will provide an awareness of the outdoor education/recreation field through classroom involvement and participation in a residential outdoor skills seminar. Topics include: outdoor leadership principles, Conservation Authorities, Provincial Park Systems, Parks Canada and the National Parks System, organized camping and evaluation, current environmental concerns, and professional associations and organizations of particular interest to outdoor recreationists.

Package Design 1

The course will provide students with a working knowledge of design tenets and theories and, through a tie-in with Packaging Graphics 1, the application of design elements to packaging and advertising graphics.

Packaging Graphics 1

This course introduces the student to client-oriented design. Packaging Graphics has constant tie-in projects in Packaging Design 1.

Packaging Graphics 2

Using design tenets previously discovered in first semester courses, students apply these theories, together with other in more advanced techniques, to projects relating to the design and marketing of packaged products.

Packaging Research 2

Direct contact with packaging manufacturers and users, in this research, provide students with an opportunity to meet with future clients and employers.

Packaging Studio Methods 1

Students become familiar with many of the materials used in package design (felt markers, various pencils, drafting tools, etc.). They learn to present a piece of design work to a client, how to present themselves, simple studio costing and numerous other requirements for doing a good piece of saleable package design.

Packaging Studio Methods 2

This course presents an introduction to some of the demands in finished artwork for high-speed reproduction. The course also continues to offer insight into the regular methods used by professional designers in meeting the often urgent needs of clients and a thorough knowledge of the different printing processes.

Packaging Technology 1

This is a basic mathematics course with the emphasis placed on visual geometry and volumetric comparisons, application of mathematics to area, volume and weight problems in packaging. The student will also learn how to use a perfect calculator to solve most mathematics problems.

Packaging Technology 2

This is an introduction to the simpler mechanical components and principles encountered in packaging machinery and an application of mathematics to technical problems in the packaging of consumer goods.

Packaging Typography 1

Basic mechanical knowledge is necessary before students can actually design with type. Emphasis is placed on these technical areas. Hand lettering for both layout and reproduction, and the ability to identify, indicate and specify type in the classic faces are also developed.

Packaging Typography 2

This studies further typographic design, with special reference to the demands of packaging graphics, type mark-up, special photographic distortion techniques and the identification of specific type styles.

Performance 1

Although the major portion of the work will be the rehearsal of two character realistic scenes, part of this course will be devoted to related exercises and improvisation. Each of the scenes will be taken through the key phases of rehearsal up to the "first run through" stage. There will be a presentation of the scenes to the faculty at the conclusion of the course.

Performance 2

This course will involve a concentrated study and performance of a series of interrelated scenes of a particular play, to include individual and group process, discussion and performance.

Performance 3

Students will rehearse a realistic play. In addition there will be discussion and exercises. Each student will be responsible for developing his role on his own. The instructor's main function will be to lead the student toward the development of a constructive working method.

Performance 4

This segment of Performance will be devoted to improvisation. The course will explore what improvisation can and cannot do by trying out

the various forms it may take. The outcome of this segment will be an improvisational workshop wherein the various forms are given outward manifestation.

Personnel Administration (Arena)

This course will examine the components of the management process, as they affect arenas. It will analyse the various stages of employee relationships with emphasis on human relations and effective supervision. Case studies and other resources will be used to facilitate the application of various theories to the practical aspects of arena management.

Perspective and Rendering 1 (Interior Design)

Emphasis will be placed on pen ink, pencil, water colour and full colour rendering for good project presentation. In conjunction with the above, the following aspects will be reviewed: two-point and one-point perspectives, shade and shadow in plan and elevations, shade and shadow in perspective and reflections in perspective.

Perspective 1

Work in the basics of perspective will be applied to drawings in line of objects and products. Studies in lighting will introduce techniques in tone. Tonal analysis and rendering will be studied in context with form, surface and reflection.

Perspective 2

Perspective studies will be applied to architectural forms, the figure in relation to objects and environment. The conversion of given graphic reference to new concepts will be studied along with the adaptation of figures and objects to given locale. Project rendering will be in line, tone and colour media. Correction of photographic reference distortion by graphics will be studied.

Philosophy of Law Enforcement 1

This course is designed to thoroughly familiarize the student with working conditions and prejudices to be encountered in law enforcement and security jobs.

Philosophy of Leisure

Students develop their own "philosophy of leisure" through an introduction of concepts of leisure and recreation, their effect on the delivery of leisure services today, and in the future. The major factors affecting leisure patterns and the theories of contemporary authorities relative to current and future social, economic and other conditions are examined.

Photography – A/V Techniques

Students will become proficient in the operation, maintenance and applications of audio-visual production and presentation equipment. Students will also practice A/V techniques and show that they are able to properly assemble, store, handle and, if necessary, repair the non-print media they must use.

Photography – Applied 1

In this history of photography, tracing its evolution from the time of Aristotle to the present, the development of photographic processing and of the basic Meniscus lens to the current complex compound lens will be covered. Lectures, demonstrations and practical assignments will be the format of this course.

Photography – Applied 2

This course reviews the problems of on-location and studio assignments of a more complex nature. Subjects will require a greater dgree of skill in all aspects of photographic techniques. The use of props, the importance of deadlines and the need for an application of composition, creativity and imagination will be covered through lectures, demonstrations, critiques and participation.

Photography – Applied 3

Students will discuss in class and apply in their projects the various skills and techniques essential to a flexible professional photographer. Visits to professional studios are scheduled and students will devote much time to research ideas for their thematic assignments, secure props and apply their skills and imagination for high quality results.

Photography – Applied 4

Students will work toward the preparation of their final portfolio by experiencing various advertising and product assignments. Shooting sessions will be carried on in the College's two studios, will process monitor strips and plot the performance on process control graphs under supervision.

Photography – Business Management

The student will be exposed to the fundamental procedures of small business management and operation. Subjects covered are: management techniques, marketing, time management, advertising, record keeping, office procedures and personal attitudes.

Photography – Colour Process

The common colour processes such as transparencies and colour negative material will be explained through lectures, demonstrations and practical assignments. Colour printing and filtration in the process will be skills the students will acquire and apply in the rest of the program. Maafi and Hope colour processors are used.

Prerequisite: Successful completion of first year.

Photography – Darkroom Techniques 1

This course is a basic introduction to the chemical processes involved in darkroom procedures. Lectures and demonstrations focus on the proper techniques and procedures to follow in film development and projection printing.

Photography – Darkroom Techniques 2

This course will extend the student's knowledge and skills in the control of black-and-white printing and film processing. A variety of processing techniques will be explained and practiced: line film processing, toning, posterization, sensitometry, and the zone system.

Photography – Graphics

This course shows the close relationship of photography to graphic arts (printing) and graphic design (commercial artists). Lectures will introduce the types of reproduction techniques and operations and their inherent problems. This background on reproduction processes will enable the student/photographer to anticipate the requirements of the artist and the printer/engraver.

Photography – Lighting 1

This course on basic lighting techniques will familiarize the student with the various sources and types of lighting. The student will learn the operation and maintenance of common types of lighting equipment, the effects produced by natural (day light) and artificial (tungsten) light and will help manufacture lighting accessories such as diffusers, snoots, cookies.

Photography – Lighting 2

Complex lighting techniques will be demonstrated in a natural progression from the basic lighting techniques learned in Lighting 1. Lighting techniques applicable to various subjects, including tungsten lights, are discussed and demonstrated in the classroom and in the studios.

Photography – Lighting 3

Through lectures, demonstrations and practice of various lighting techniques to produce special effects, students will learn advanced electronic flash techniques using studio flash units and accessories.

Photography – Professional Studies

Guest lecturers will demonstrate their particular specialties and discuss the problems and difficulties in their field of photography. This series of demonstrations will introduce new techniques and processes for the students to apply and/or modify for their own projects or client demands.

Photography – Studio 1

This course will introduce the students to the technical terminology of photography and to the identification, operation, and maintenance of photographic equipment used in studios. Students will also learn to operate the medium format camera (6 x 6, 6 x 4.5 and 6 x 7) and the characteristics of the specific models.

Photography – Studio 2

Through lecture and demonstrations, this course will familiarize the student with the techniques of large format camera operation, including movements of component parts and corrections or distortions of the image produced. A good understanding of the operation of this equipment is essential to successfully complete the practical assignments given in Applied Photography 2.

Photography – Studio 3

This course will strengthen the student's skills so that a competent approach and appreciation of difficult subjects can be attained using colour and black and white. The student will become familiar with lighting manipulation for the best effect and will learn to use props to attain harmonious design and composition.

Photography – Studio 4

By a series of lectures, demonstrations and seminars, the student will acquire sufficient knowledge to be capable of doing portraiture in both black and white and in colour. Lighting styles and techniques will be demonstrated to show how to achieve special effects.

Photography – Theory 1

This course is an introduction to the theory of light, the composition of light (natural and artificial), its characteristics and behaviour. The response of photographic emulsions to the different types of lighting, and an introduction to basic options (as related to simple and compound lenses) will be followed by demonstrations of lens performance and aberrations. Basic formulae will be explained in relation to optical laws. This course is taught by the lecture method in conjunction with demonstrations by the instructor and student participation in blackboard problem-solving exercises.

Photography – Theory 2

Lectures and demonstrations will expand the student's knowledge and skills pertaining to optical formulae, lens performance and lens types.

Photography – Theory 3

The student will acquire background information on specialized aspects of photography and the theories behind their use. Fields covered are: archival processing, aerial photography, colour retouching on prints and negatives, photo equipment, and medical photography.

Photography – Theory 4

To introduce the student to the concept and practical workout of quality control, lectures and exercises will be given on the monitoring of black-and-white and colour materials.

Photography For Graphics 1

This basic photography course will take the student through the photographic sequence from camera to darkroom so that the training may be applied to photographic illustrative elements of Graphic Design.

Photography For Graphics 2

Practical basic training and an understanding of the photographer's scope and limits will prepare Graphic students to create concepts designed for illustration by photography. Certain appropriate projects originating in Graphic Design 2 will be photographed by the student to fully understand this application. The value of photographic reference in abstracted and realistic illustration will be demonstrated in relation to the Advertising and Graphic Design program.

Photography For PR Practitioners

This course will cover the basics of photography and how to use as a communications tool.

Photography 1

This course introduces basic photographic techniques and procedures. Students will demonstrate proficiency in operating camera and darkroom equipment and will be processing and printing their own black and white pictures. In conjunction with the AV Media Applications, Introduction course, students will take colour slides for a multi-image show. They will learn to present their pictures using various display formats.

Photography 2

Students will experiment with a variety of advanced visual production techniques using photographic processes. High contrast line film exposure and processing techniques as well as non-photographic methods will be introduced. The student will also produce and present quality photographic visuals that can be used in educational film and video media.

Plant Identification 1 and 2

This course will provide the student with the background information needed to understand the present system of plant classification and nomenclature. It will involve both outdoor labs and in-class instruction in the identification and landscape use of those woody plants which are hard and commonly used in Southern Ontario.

Portfolio

This is an advanced class in methods of graphic and personal/professional presentation.

Post Production Techniques 1 – 16mm

The student will have to complete a 16mm film production. Technical aspects of picture and sound editing are discussed with respect to established procedures in the film and TV industry.

PR Research

This course will familiarize the student with the techniques used in surveys and polls; starching, copy-testing; organizations specializing in this work and how their services are used.

Practical Horse Care 1

Students review the many aspects of horse care and handling including grooming; mucking-out; trimming; clipping; the selection, care, repairing and fitting of English and Western tack; lameness; horse clothing; methods of restraint; T.P.R.; general signs of health and disease; sick nursing; wound care; first aid; bedding materials; stable vices; preparation for travel and loading. Students will be supervised for an additional two hours per week, practicing skills learned in class.

Practical Horse Care 2

This course aims at perfecting some of the skills acquired in Practical Horse Care 1 (i.e. clipping) and will introduce several new aspects of horse care: bandaging; the care, fitting and parts of harness; lunging; braiding manes and tails; trimming and showing. You will be supervised for an additional two hours per week, practicing skills learned in class.

Practical Public Relations 1 and 2

Specialized fields have their own problems and special tools and techniques for solving them. This course provides in-depth analysis of the one and comprehensive practice of the other.

Practicum 1

As apprentice coaches with one of the Centre's chief instructors, students will get involved in the planning of lessons and course development for one group of first-year students and will follow that group's progress throughout the semester. Students will be present each week for the first year lecture plus the two riding sessions. They will assist the chief instructor with class preparation, warm up and setting up of fences.

Practicum 2

As in Practicum 1, students will be apprentice coaches with one of the Centre's chief instructors and learn more about the planning process, developing course outlines for specific topics and revising them on completion of the classes taught on those topics by the chief instructor. Again, students must attend all lecture and lab sessions for the particular group of Riding Skills 2 that they are assigned. In addition, they will act as assistant instructors for a ten-week evening course on Introduction to Riding.

Principles of Floral Design 1 and 2

This course outlines in detail the principles of designing flowers for all occasions, stressing shape or line, scale, balance and colour harmony. The course will also deal with special holiday treatments of flower sale items that are becoming more demanding in the industry.

Production Management 1

In this comprehensive study of business as it relates to Film and Television Production, emphasis is on adapting feature film production organizational methods to documentary film and television shows. This course is directly related to the practical organization of all second-year crews and assignments.

Program Scheduling 1

This is a course in scheduling, programming and promoting the year-round events in an arena, the corporate image and public relations for the arena.

Properties 1

This project-oriented course introduces the student to the art of properties management and development. Students will analyse scripts to determine properties required and learn where to get them and what to do with them.

Property Management and Security

This course provides a detailed study of the role of Property Management in hotels, clubs and resorts. The student will learn the functions and duties of a property manager, which include a knowledge of planning budget and various aspects of security; fire prevention; energy conservation; environmental safety; and waste disposals. Theories of contracts and leases for maintenance of property and operational equipment plus and study of management work methods and an analysis of feasible operational costs and economical alternatives are also included.

Public Relations Lab 1

This is an introduction to the basics of the public relations work situation with emphasis on the development of news awareness and organizational of time and material. Assignments are related to Public Relations Writing 1 and 2.

Public Relations Lab 2, 3 and 4

These courses will put into practice the various ingredients, procedures and techniques used by the practitioner. First and second year students work singly and in groups to put into practice classroom theory.

Public Relations Seminar 1 and 2

Guest lecturers, panels and group discussions will cover specific situations taken from the experience of the invited experts.

Relations Writing 1

This is a core subject which ana- the styles of writing necessary Public Relations and rigorously de- ps the techniques to use them ef- ively. It includes writing for print, and TV; proposals, advertising, ic service announcements and nalized correspondence.

Administration

This course studies the various po- ns and their functions in the man- ment of racetracks. It will include a ment in one of these areas such mutual clerk, publicity, racing sec- ry's office, etc.

Industry 1 oroughbred)

Racing Industry 1 involves a study e many administrative and techni- aspects involved in Thoroughbred e. Students gain a comprehensive ure of: backstretch activities; con- ing methods; the administration control of afternoon racing; gov- ment involvement in the Thorough- industry; Thoroughbred history; the selection principles. Also in- ed in this course is a two-week placement at the Thoroughbred k.

Drama 1 and 2

This course will be concerned with development of two areas of broad- g- voice and drama. The course examine different types of drama how they relate to radio broadcast- as a whole, and tackle the practical ct of communicating the various s of drama through the use and ulating of the voice.

Laboratory 2

This course is a project program. student or group of students will en production assignments to , research and produce.

News and Voice Training

This course will study broadcast alism with regard to its daily ice. Students will participate in -style newsroom, and each stu- will rotate through all the desks; , weather, sports, announcing, , and assignment. Students will edit, and announce newscasts on e during each class.

Radio News 1

This course is designed to lay the foundation for writing basic radio news copy. Work will be balanced between theory and practice.

Radio News 3

The course will teach the skills necessary for several kinds of radio news writing; for editing copy and selecting stories for airing; analyse newscasts heard on FM and AM radio stations. Students will look at the question of journalistic ethics, examine CRTC regulations, the history of radio and its psychology and the concept of all news and other new developments.

Recreation Administration

This is a basic introduction to organizational and administrative processes and techniques involved in recreation. The first section will focus on administrative structure; organizational considerations; and policy development. The second section will include legal aspects and liability; the role of computers; and research.

Recreation Facilities

This course will introduce the student to the major recreation facility components found in a community. The process of planning, designing, constructing and operating outdoor/indoor facilities will be covered.

Recreation Finance

In this introduction to the area of recreation finance, techniques and processes involved in budgeting, accounting, purchasing, grantsmanship and fund raising will be examined.

Recreation Personnel Management

An introduction to the leadership requirements of the recreation professional with special emphasis on personnel management. Current theory related to personnel management will be examined and leadership skills will be developed through experiential learning situations.

Refrigeration and Ice Making 1

This is a study in the theory of refrigeration and the components of refrigeration systems, with the emphasis on day-to-day operation and maintenance, and ice-making techniques for the various types of ice.

Rental Shop Operation

This course will focus on the ski equipment as it relates to rental operations.

Reproduction and Breeding 1

A detailed study of reproductive physiology stressing the normal regulation of sperm and ova development, conception, gestation, parturition and lactation are the major topics covered in this course. Considerable time is spent studying the estrous cycle so that proper detection of estrus and mating times are apparent.

Reproduction and Breeding 2

Problems of the broodmare and foal will be discussed. Artificial insemination, breeding the problem mare and basic genetics will also be covered. Students will take a one-week placement at a breeding farm. This will encourage actual working experience during foaling and breeding.

Retail Radio Sales

The student will be introduced to the role of the sales person in radio both for local and national radio.

Riding and Driving 1 and 2

This course will provide the student with the correct basics in English and Western Equitation as well as Pleasure Driving. The riding courses cover such major areas as correct body position, effective aid usage and the psychology of horse control. The driving section will teach the students harnessing techniques, methods of driving, and familiarization with various vehicles.

Riding Skills 1 and 2

Building upon the skills acquired in Riding and Driving this course will offer the opportunity to advance in the areas of either Western or English Riding or Racetrack Exercise Riding. Students will develop their Riding Skills in order to be a more diversified stable manager.

Script Writing 1

In this introduction to the basic skills needed to prepare, organize, and write scripts for film projects, the student will research, prepare, and write outlines, treatments, and shooting scripts, and will prepare story boards and detailed scripts for several proj-

ects, including all assignments in the first semester Super-8 Film Production Workshop.

Script Writing 3

This course continues to develop journalistic writing skills for Film/TV, as well as writing interviews and researching the area of specific craft formats such as educational, industrial, industructional, PR, etc. In the winter semester it expands into the area of commercials and dramatic formats.

Scripting 1 and 2

In this introduction to the basic skills needed to prepare, organize and write scripts for AV presentations, film and TV projects, students will be responsible for researching, preparing and writing outlines, treatments and shooting scripts. They will also be required to prepare story boards and detailed scripts for several AV projects.

Security Practices

This course will give the student an understanding of Security Practice as it relates to a variety of security settings. Emphasis will be directed towards all aspects of physical security including those factors of internal/external influences, control systems, industrial and commercial approaches to security, and the problems encountered in each. Focus will be given to special audit areas and method of surveying in a security context.

Showing and Judging 1 and 2

These courses will teach you the principles of conformation assessment as they relate to different breeds of horses. The rules, regulations and judging of hunters, jumpers, equitation, fine harness, draft and coaching classes will be covered as well as the preparation of horses for shows and sales. You will also learn to run a horse show, design and construct courses, and you will gain experience working at a major horse show (Royal Winter Fair) in administration, tack booth, or the horse area of your interest.

Singing 1

This is an introductory course in basic singing. The student will learn to work with a piano, become aware of chords and melodies, how to use the voice – being aware of pitch, developing skills in tempo, rhythm, lyrics, the use of the body to create emotion, microphone techniques and repertoire development.

Singing 2

Continuing from the first semester's work, a student will work more extensively on the performance and interpretive aspects: voice projection, awareness of lyrics, use of the body, eyes, face and hands to create emotion, extension of knowledge about Broadway and current music and its performance.

Site Layout and Survey Math 1

Students are introduced to basic land surveying as it is applied to the landscape industry. This includes competence in the use of the basic survey instruments: levels, chains, rods, transits and other associated equipment. Practical labs shall be conducted on each component of the course.

Site Layout and Survey Math 2

This course further develops the student's ability to carry out various grade-related survey functions, including basic cut and fill determination and the setting and control of new (proposed) grades. Also, the uses of a transit or Theodolite are practised as they pertain to the landscape industry.

Ski Area Field Research

The format will consist of visits to a variety of facilities to allow exposure to the various types of operations and the methods inherent in each, as well as providing the student the opportunity to meet with their faculty advisor to plan their major research investigation format.

Ski Lift Operation and Maintenance

The student will develop a knowledge of the design, construction and operation of the various types and styles of ski lifts. Emphasis will be placed on the application of the data, to ensure the most suitable equipment installation for each specific location and requirement.

Ski Lift Operation and Maintenance 2

The training will cover: lift selection and purchases; construction techniques; lift design and operation; maintenance programs; and lift laws and regulations.

Ski Patrol and Risk Management

This course focuses on the role and the function of ski patrol operations and their contribution to risk management.

Ski Resort Food Management

Students study: food and beverage service in a ski resort, principles of food service design and layout; kitchen equipment layout; menu planning; food and labour cost control; and food purchasing.

Ski Resort Personnel Administration

This course will examine the components of the management process as they affect ski areas. It will also analyse the various stages of employee relationships with emphasis on human relations and effective supervision. Case studies and other resources will be used to facilitate the application of various theories to the practical aspects of ski area management.

Ski School Management

This course is designed to provide the student with a thorough knowledge of ski schools.

Snowmaking and Hill Grooming 1

The student will be exposed to the various types of equipment involved in the snowmaking and hill grooming process as well as their uses and the various types of areas in Ontario. The latest techniques in snow control and systematic monitoring of equipment will be combined with equipment usage to provide a total background.

Sound Recording Techniques 1

The student will learn to record high quality sound for film & television productions. The course also will expand knowledge in sound studio recording techniques as well as sound mixing of multiple sound tracks for all media, film, T.V. & audio visual.

Sound Technology 1

How to plan, record, mix, splice and prepare a sound track are all taught in this introductory course. Students examine sound effects, make a sound track for a theatre production and learn how to run it.

Special Effects 1

Students use, design and build simple effects and learn how an effect projector works. This course provides an introduction to special effects including the simple effects from fire to water. The use of rear-projection screens, scrim, splitgel, gobos is also included.

Stable and Farm Management 1

This course will introduce you to the planning process involved in designing and constructing an equine facility. Topics will include: choosing a location, stable construction and design, facility and farm layout, landscaping, and fencing. In addition the course will also touch on personnel management, the role of the manager, stable and farm safety, and computer applications with some hands-on experience. Field trips to local farms will be used to support the classroom material.

Stable and Farm Management 2

As a continuation of Stable and Farm Management 1, this course examines the business operation of a farm facility. Marketing and advertising, financial planning, management and control, record keeping, labour, financing i.e., leasing, buying, renting, organizational structure, taxation, insurance, the law related to the horse, and licensing will be some of the topics covered.

Stable Management

Students will be prepared to meet the stable management requirements of the Level 1 and Level 2 Equestrian Coaching Certificate Program. From the practical side, students will learn to muck-out and bed down stalls; groom; tack, care for and repair tack; trim; clip; bandage; braid; and take temperature, pulse and respiration. From the theoretical side, students will learn about the basics of conditioning and conditioning methods; transportation of horses; trailer safety; the food and feeding; unsoundness; lameness analysis, teeth and aging.

Stage Management 1

The role of the Stage Manager will be discussed during this immersion course in the functions and duties of the Stage Manager, in and out of rehearsal. Students will learn about preparation, blocking, rehearsal procedures, discipline, technical rehearsals and calling the show.

Still Photography 1

This course will introduce the student to basic techniques in black and white photography. Students will acquire all the necessary skills in photography, geared mainly towards cinematography. It will be demanding on student's technical skills, readiness and personal imagination and creativity.

Still Photography 2

The lectures will build on and refine the knowledge in black and white photography acquired in previous semesters and will expand to colour and black and white slide presentation and location lighting techniques, to enhance the 16mm cinematography course as well as to cover A/V production techniques.

Structure and Finance

A study of the management and financial structures, staff responsibilities, personnel requirements in public and private arenas, and the various legislation affecting arenas.

Studio Methods 1

You will learn all the basic materials, instruments and equipment used by the professional graphic artist. It is a practical training in studio procedures, the presentation of artwork as well as in professional practices and relationships. Initial reproduction methods will be related to techniques, i.e. line, pre-separated art and halftone.

Studio Methods 2

Advanced techniques in camera-ready art will be taught in sequence with reproduction methods. Pre-separated and four-colour reproduction will be included. Appropriate projects will originate in the mainly conceptual Design 2 and Graphics 2 courses.

Super-8 Production Workshop 1

Students will acquire the technical capability to complete a series of assignments of increasing technical difficulty. This course continues to develop the technical skills of the students by introducing sound recording techniques, Super-8 editing and sound projectors. Some assignments will intertwine with projects in other courses.

Supervisory Techniques 1

This course is an overview of job responsibilities. Through role playing, field practice experiences and theoretical materials, the student will develop human relations skills and an understanding of the role of a supervisor.

Supervisory Techniques 2

The focus of this course is the creative application of communication and management functions to the supervisor's job.

Systems 1

This course is a broad investigation of systems and module theory with a study of systems, multiples, nodes, bridges, and relationships in Nature, Art & Design, Architecture, and Production; analysis of successful systems and varying definitions of systems.

Tariff and Ticketing 1

This course will teach the students the correct application of the fares published in the NORTH AMER PASSENGER TARRIFF (ATPC) , part 1, 2, 5, and 6. It will provide the students with the skills required to complete passenger tickets based on these fares and rules.

Teaching Skills 1 and 2

Students will gain teaching experience acting as apprentice coaches with one of the Centre's chief instructors in both arena and stable situations. In addition, they will act as assistant instructors for a ten-week evening course on Introduction to Riding.

Technical Communications 1

This is a course in Basic Drafting Theory as it applies to standard practices for representation of 3-Dimensional objects. C.S.A. practices form the framework of reference. There is a class time of 3 hours per week for lectures, demonstrations and discussions of equipment and techniques.

Technical Communications 2

This course is a continuation and development of Technical Communications 1, with extensive emphasis on design detailing of products in shop drawings.

Technical Illustration 1

Students will take a five-hour period of study – generally following a pattern of one hour with the camera, two hours of sketching and two hours of ILP.

Textiles

This is an introduction to the aesthetic characteristics of textiles and their functions in the interior environment.

Theory of Coaching Level 1 and 2

The Ontario Coaching Development Program provides amateur coaches with formal training in the science and art of coaching to improve leadership skills. This program awards accredited certification to successful participants. Topics include the role of the coach, leadership and communication, sports psychology, motor learning and motivation, growth and development, biomechanics, exercise physiology, sports medicine and principles of athletic conditioning.

Theory 1

This introduction to the basic elements of music includes melody, harmony, rhythm and timbre, modern harmony, chord symbolization, chord scale theory and harmonic progression.

Theory 2

This course is a continuation of Theory 1. Melody writing and analysis receive emphasis along with the study of chord function and harmonic analysis. Studies in harmonic progression are continued.

Thesis 1

This course, combined with Thesis 2 (semester 6), gives the student the opportunity to identify a specialized area of interest and pursue an in-depth project encompassing the full design process. Thesis 1 is intended to lay the groundwork for project execution in Thesis 2.

Thesis 2

Thesis 2 is a continuation of Thesis 1 where the student completes the project tasks identified and approved in Thesis 1.

Tourism 1

This introductory course will provide an understanding of the scope of the Travel and Tourism Industry. The student will examine the background of tourism as an industry and will develop a knowledge of motivating needs of the tourist and the many segments of the travel industry.

Tourism 2, 3 and 4

These courses will increase the students' knowledge of tourist destinations throughout the world. Special emphasis will be placed on significant cultural events, recreational facilities and tourist attractions.

Travel Techniques "A" 1 and 2

This is an introductory course designed to teach students the use of the Domestic and International Airline Guides, how to read and interpret hotel reference books/rate sheets, travel information manuals and the correct method of making reservations.

TV News 1

This is an introduction to television news writing. The course will emphasize basic writing techniques for television from on-camera stories to the scripting of film and tape.

TV News 2

The course continues the development of skills introduced in the first year television writing classes. It will concentrate on the basic techniques of television news writing and reporting.

TV News 3

This basic course in the craft of television news production covers all aspects of studio electronic techniques including video tape and film production. Students will produce news and feature stories as well as complete television newscasts. There will be emphasis on the relationship between news content and TV presentation.

TV Operations

Students will be introduced to the basic operating and production techniques for television. Starting with the single camera video recording system, students will progress to the multiple camera facility of the basic television studio. At that time, they will learn to research, develop, crew, and direct simple television productions.

TV Production 2

Students will be given an introduction to writing for television with emphasis on form and format. They will identify their audience, set objectives and effectively use the video medium. They will research and prepare story outlines and shoot scripts. Once completed, they will be required to direct their programs or to perform as crew members on other student productions in the colour studio.

TV Production 3

Different aspects of television production and operation will be reviewed and students will be preparing scripts for individual and/or group productions. The type of programs to be produced during this semester will be determined by the class in consultation with the instructor. These programs will reflect the types of production that the students might become involved with after graduation from the Audio-Visual Technician Program.

TV Production, Introduction

Students will review basic television operations to be able to operate television studio equipment and develop and produce simple television programs.

Typography 1

This analysis of current designs and their relationships to historic forms, studies the structure, aesthetics and the psychology that will be applied to projects in hand lettering. Field trips to typographic firms will demonstrate typesetting processes.

Typography 2

With an emphasis on aesthetic qualities and the emotional aspects of the medium, you will be trained in the design application, selection and mark-up of typography at the layout stage in calculation of final art production.

Voice 1 and 2

This introduction to voice production and physiology will continue to develop over the course of the program. The physiology of speech will run parallel with the practice of basic speech production and will constitute a scientific basis for practical, applied voice and speech exercises. The course gives the beginnings of a comprehensive and detailed knowledge of speech and voice production which

...can carry the students beyond the ...boundaries of the program into their ...professional work.

...Voice 3 and 4

This second year of vocal training is ...igned to carry the student farther in ...defining of the use of the vocal instru...ment. To accomplish this there will be ...practical work in reading and speaking ...scripted passages. Additionally one ...ss a week will deal with a study of ...honetics designed to develop the stu...nts' hearing ability, not only for ...eir own sounds, but the sound of oth...s. This aspect of work will also play ...part in the acquisition of dialects for ...aracter work.

...Work Experience Fieldwork

Students spend a full week (Mon...y through Friday) working on an au...o-visual production or a technical ...k as part of an organization's or in...tution's staff. All students are re...uired to be at Humber College one ...y every month to present and file ...ogress reports, take part in discus...ons about their work and participate ...any seminars, lectures or technical ...monstrations which might be ar...ged on that day.

...riting For Radio 1

This course will feature continuity ...iting for commercials as well as cor...ct writing procedures for news and ...orts programs.

...riting For Radio 2

This course will continue to offer ...chniques of writing begun in Writing ...r Radio 1. The art of writing station ...romotion and public service an...uncements will be taught.

...riting For Radio 3

This cou...rse is a continuation of ...iting For Radio 2 with emphasis on ...lected topics in commercial writing ...d news and sports events.

Business

Accounting Concepts 1

This course assumes no accounting background on the part of the student. It covers the complete accounting cycle with emphasis on the conceptual as well as the procedural elements of the cycle. The course concludes with a chapter on accounting for cash.

Accounting Concepts 2

This course provides a detailed study of the accounting for the various items appearing on a balance sheet, their control and their effects upon related items of income and expense, including accounting differences for each type of business enterprise.

Accounting 2 (Accounting Concepts and Practice)

Prerequisite is previous completion of an introductory accounting course such as Financial Recording.

The course covers the complete accounting cycle at a fairly complex level and stresses both theory and application. Practical work will include case studies and practice models. Students will be expected to achieve high standards of accuracy, speed and accounting performance.

Advanced Marketing Administration (Business Administration)

This advanced course represents the final level in Humber's Marketing Program. It includes a Marketing Management simulation which offers an excellent vehicle to refine the many concepts acquired in earlier courses.

Assembler

This course will deal with the Assembler programming language. The student will receive a complete systems review (including interrupts, channel operations, etc.) followed by the study of the concepts of Assembler and the S360/S370 machine language. The course will cover the standard and decimal instruction sets (approximately 100 instructions), and analyse DTF and DCB entries, and macro writing.

Assembler 2

Assembler 2 is a continuation of Assembler I and involves writing program applications using VSAM and DAM files. The students will be introduced to MACRO writing and will be required to write their own macros.

Automated Accounting

This course is designed to give hands-on experience in the production of accounting records and reports by microcomputers.

Participants will use software programs for general and subsidiary ledgers for small businesses; and various schedules and analyses required for any type of business organization. Practice will be given in the use of coding and editing techniques. Prerequisites include Accounting 2 and Computer Literacy, or comparable courses or experience.

BASIC

B.A.S.I.C. programming language is widely used today by business for both batch and interactive programming. This course gives an indepth coverage of the language and its use for business applications. Programming techniques for writing correct and well organized programs will be stressed.

Basic Accounting Principles

This course provides an introduction to the basics of accounting. The accounting cycle is covered in brief outline from the introduction of data to the preparation of financial statements. The use of special journals and the general ledger is explained, along with the maintenance of subsidiary ledgers and payroll records.

Basic Business Math Skills

The course covers the basic skills required to comprehend and complete the Business Mathematics course. Review of arithmetic, algegra and some financial math are the backbone of the course.

Basic General Insurance

This course is based on the basic course of the Insurance Institute of Canada and is designed to give the Legal Assistant student a broad overview of the general business. While obtaining credit leading to a diploma at Humber, the student will gain recognition and a credit from the Insurance Institute of Canada, by writing two exams set by the Institute which will give the student an additional advantage should they wish a career in the insurance business.

Course Descriptions

Business Mathematics

Various instructional approaches will be used to enable the student to pursue and to achieve a satisfactory level of competence in the following areas: arithmetic operations; percentages; basic algebra; simple interest; compound interest; present value; annuities and bonds. This is a prerequisite for Business Statistics and Quantitative Analysis.

Business Statistics

This course covers modern descriptive and inferential statistics. Little mathematical sophistication is required as the course deals with the application of formulas and techniques and not their derivation. Emphasis will be on the recording, analysis and presentation of data, forecasting and decision making.

Buying Orientation

The key to successful retailing is buying merchandise that will appeal to customers, selling it at the right price, and earning a profit for the store. A successful buyer must be alert to the needs of his customer, and must have contact with reliable suppliers and manufact urers. This course will focus on goal setting and the planning required to achieve these goals through basic assortment planning, promotional buying and execution and control of the buying function. The Co-op student will learn to identify buying alternatives suitable for various product lines and store types.

COBOL 1

This course will enable the student to develop sufficient knowledge of COBOL to program complex procedures representative of typical business applications. The concepts and organization of the language will be discussed from an efficiency point-of-view. The majority of common business programming techniques using COBOL will be covered from an applications approach. A case study may be required.

COBOL 2

This is a continuation of COBOL 1 and deals with more advanced COBOL applications. Language features, such as Report Writer, SORT, VSAM File Updates, and Table Handling will be explored requiring application programs to be written by the student. A case study will be required.

Commercial Law (Legal Assistant Option)

The goal of this course is to continue the development of the study of selected topics in Canadian and Ontario Commercial law in order that the student be capable of working in a law office or other offices where a knowledge of commercial transactions and related law is required.

Computer Literacy

This introductory course will include hands-on operation of microcomputers and the writing and testing of elementary programs in the BASIC language. Students will be introduced to the hardware, software and terminology necessary to a basic understanding of computers.

Cost Accounting 1

This course provides an introduction to cost accounting concepts, including systems for job and process costing. Special problems relating to the application of factory overhead costs will be studied in depth.

Cost Accounting 2

This course commences with an introduction to the budget, followed by a study of the flexible budget. Subsequent topics are the standard cost system, direct costing and cost-volume profit analysis.

Court Procedures

This course involves a study of the procedures related to civil actions in Ontario. The course objective is to familiarize students in the Legal Assistant Program with the practice and procedures of civil litigation (as opposed to criminal matters) in the Ontario courts.

Criminal Law

This course is a study of criminal court procedures in Ontario. The objective of the course is to familiarize Legal Assistant Program students with the practice and procedures in Ontario's criminal courts.

Customer Relations

In the dynamic field of retailing, customer services are no longer confined simply to free parking and delivery. Today the modern retailer must consider such services as consumer credit, storage privileges, special catalogues, service, warranties, consultants and food services . In the tough, competitive world of retailing, it may be these extra services that will attract potential customers. Co-op students will examine these various store services and the approaches for different commodities, their function and cost.

Data Base

This course is designed to give the students a basic insight into the essential facts about the nature of a data base, its construction and administration. It also shows that the E.D.P. (Electronic Data Processing) evolution is leading companies with significant E.D.P. operations in the direction of a data base form of information organization. Requirements for a data element dictionary, data security, and a user interface language are discussed.

Dicta Typing

Students will learn the basic procedures for machine transcription with exposure to different types of dictation. Punctuation, capitalization, formatting and proofreading will also be covered. In addition, the course is designed to help students with spelling, word usage, and grammatical skills.

Distribution Centres

Behind every successful retail organization is an efficient and effective distribution centre. The purpose of the centre is to gather together merchandise from many different suppliers, and to distribute this merchandise to the retail outlets of the organization as it is needed. This highly organized system is studied through field trips to several distribution centres, in order to understand the processes involved even before the merchandise reaches the receiving doors of the retail store.

Elements of Accounting

This course provides an introduction to the subject of accounting. The full accounting cycle is covered from the introduction of data to the accounting cycle through its detailed recording. Practice will be obtained in the preparation of financial statements, maintenance of subsidiary ledgers and payroll records.

The objective of the course is to give an insight into the mechanics of accounting so that the student may have an understanding for reference in business situations or as a foundation on which he may continue in advanced study of the subject of accounting.

Elements of Advertising

This course offers a basic overview of the Canadian advertising scene today. Beginning with an analysis of the several purposes of advertising, and continuing with an examination of the various media available, the students will then consider the steps required to plan, prepare and produce advertising messages. Emphasis will be placed on advertising's advantages and limitations as a component of the promotion mix, as well as the necessity for and the difficulties involved in evaluating its effectiveness.

Elements of E.D.P.

This course provides a detailed study, at the elementary level, of the computer and computer applications in terms of historical evolution, files, flowcharting in the relationship to problem solving, and an introduction of programming, using a high level language to solve business related problems. An introduction to systems concepts and to systems analysis is also provided. The student should gain sufficient understanding of computer capabilities and be able to use them to their advantage in a variety of business applications.

Elements of Financial Recording

This course is an introduction to accounting and business records. It will cover the analysis and recording of transactions, from the use of source documents up to the preparation of simple financial statements. Emphasis will be on a systematic approach to the processing of business data. In-class practice will range from basic exercises to a complete accounting cycle at a simple level.

Elements of Law 1

This course will provide an introduction to the study of Canadian legal systems with a particular emphasis on the law in Ontario. The course will primarily concern itself with business law, however, there will be time spent with the other aspects of Ontario and Federal law. The major objective of the course is to give the student sufficient understanding of law that they will have some facility to use in whatever type of occupation they may undertake.

Elements of Pension Plans and Group Insurance

A basic review of statutory, and employer-sponsored pension, group insurance, unemployment and incentive plans.

Elements of Systems

This course is an introduction to the techniques of Systems Analysis. It will cover such topics as: concepts of analysis, data gathering, forms and field design, and procedures to implement a computer system. The student, using a case study, tries to improve a typical business system and demonstrate their ability by writing reports and presenting a proposal describing the changes.

Executive Applied Procedures 1

The objective of this course is to develop speed and accuracy at the typewriter and ensure comprehension of typewritten communications including introduction to the use of transcription machines in various areas of business, industry and the professions.

The student will be instructed in the relationship of the professional secretary to the office environment, the reception of visitors, the handling of appointments, and a secretary's duties with regard to public relations.

Executive Machine Transcription 2

This course will introduce material of a more detailed and complex type and will require that the student put into practice the knowledge of format and style gained in Executive Office Procedures 1 and 2. The material will continue to be integrated with the type and degree of difficulty being currently presented in Executive Office Procedures 2. Continuing emphasis will be placed on correct language usage in order to broaden the student's knowledge and ability of special terms and word usage.

Executive Machine Transcription 3

This course will continue to improve the student's facility with transcription equipment, the speed and accuracy of operation, and the knowledge of the various vocabularies used in different areas of business, industry and the professions. Theories of layout, technique and design will be incorporated in the material given to the student, and the criteria used in testing will be the production of usable, mailable material, accurately produced within reasonable time limits.

Executive Office Procedures 2

This section of the course will widen the student's knowledge in typewritten communications, including the taking and giving of office-style dictation both of instructions and simple business communications. Composition assignments will be given and the preparation of quality transcription will be emphasized. The responsibilities of handling the mail, the use of transmittal services, the business telephone, and travel arrangements will be taught. The duties connected with the preparation and operation of meetings and conferences will also be included in this section.

Executive Office Procedures 3

This course will cover such topics as the organization of business data, research, preparation of reports and procedures writing. Instruction on the financial aspects of a secretary's responsibilities such as banking, insurance, investments, payroll, tax records, will be given, in addition to familiarity with simple legal procedures and papers. The student will be encouraged to plan a professional future and prepare for administrative duties, and assistance and guidance in these endeavours will be given.

Executive Shorthand 1

This course is designed with emphasis on vocabulary building, shorthand phrase outlines and maintaining dictation at varying speeds. The student will also acquire the ability to transcribe dictated material within stipulated time periods.

Prerequistie: Shorthand - 60 w.p.m.

Course Descriptions

Executive Shorthand 2

This course will provide the student with the ability to take dictation of a variety of business material, transcribed within prescribed times.

Prerequisite: Executive Shorthand 1

Executive Shorthand 3

This course incorporates the use of business and technical terminology in order to reinforce the student's shorthand vocabulary. Sustained dictation will be incorporated and the student will be encouraged to develop a sound knowledge of shorthand phrases. Progress will be evaluated by the student's ability to take shorthand dictation at increasing speed and to transcribe this material within specified time limits.

Facilities Planning and Layout

This course outlines and allows familiarization with techniques to allow analysis and development of effective plant and office layouts. Material handling requirments will be analysed considering the production requirement and the facilities necessary to achieve it at least cost.

Intermediate Accounting 1

This course will cover, in more depth, the introduction to accounting previously covered. The emphasis is on accounting theory and concepts and an analysis of the special problems that arise in applying these underlying concepts to financial accounting.

Intermediate Accounting 2

This course is a continuation of Intermediate Accounting 1, placing emphasis on accounting theory and conducting an in-depth study of the analysis of special problems that arise in applying these concepts to financial accounting.

Internship

There's a challenge to be met in retailing – to fill the gap between someone who wants something and someone who has something to sell. The best solution to this puzzle is the game played by fourth semester Retail Co-op students in trying to plan a new store in a new location for their company. The strategies used by the students reflect the experience gained in their placements, linked with the theory they have been studying in classes. In the final market research report the students can demonstrate that they're up to the challenge!

Introduction to Accounting 1

This course assumes no accounting background on the part of the student. It covers the complete accounting cycle with emphasis on the conceptual as well as the procedural elements of the cycle. The course concludes with a chapter on accounting for cash.

Introduction to Accounting 2

This course provides a detailed study of the accounting for the various items appearing on the balance sheet, their control and effects upon related items of income and expense, including accounting differences for each type of business enterprise.

Introduction to E.D.P.

A study of Electronic Data Processing methods, capabilities, applications of devices, methods of manipulating data, and to provide a basic understanding of the relationship between hardware and software.

Introduction to Income Tax

This course provides a study of current income tax legislation by reference to the effective Income Tax Act. Federal and Provincial Income Tax laws, as they affect corporations and individuals, are covered.

Introduction to Programming

The student will be introduced to the concepts of problem solving and programming for use in the business environment. This course provides the foundation necessary for success in subsequent programming courses. Through the use of PL/I the student will learn the basic elements common to all business programming language and will be introduced to programming techniques essential to business applications.

Introduction to Systems Analysis 1

You will study the nature of the systems concept and how it is used in the business environment. Other topics include manual procedures, forms design and control, and the design feasibility of installing or expanding a computer system.

Inventory Management Principles

The major purpose of inventory management is to ensure that the right merchandise is stocked in the right quantities at the right time. This course examines the mechanics and decisions involved in this process. The importance of inventory management is stressed through examining the costs involved in having either too much, or too little stock. Forecasting sales, planning the merchandise mix, ordering techniques and actions to be taken on fast and slow-moving merchandise are examined in order to understand how to get in and out of a season profitably.

Legal Secretarial Procedures 1

This course is the prerequisite for the advanced legal secretarial procedures for the preparation and use of a variety of basic legal material from both verbal and written instructions, rough drafts and machine transcription. Topics covered include: use of basic reference sources, legal correspondence, memoranda, accounting routines, general commercial documents, wills, and legal terminology.

Emphasis will be on the application of knowledge to produce usable material, and an understanding of the related procedures.

Prerequisite: Simulated Office Environment 1 or equivalent; 50 gwpm (within 4 errors) minimum.

Legal Secretarial Procedures 2

This course studies the terminology, documents and procedures in the area of real estate and corporate. Specific topics include steps on a real estate transaction for both purchaser and vendor, deeds, mortgages, correspondence and statements of adjustment.

Emphasis will be on the use of knowledge and the exercise of judgment in the preparation of material from written and verbal instructions, rough drafts, and machine transcription.

Legal Secretarial Procedures 3

This course studies the terminology, documents and procedures in the area of civil litigation, family law and estates. Specific topics include steps on

a civil action, on a matter, in matrimonial proceedings, and settling an estate.

Emphasis will be on the use of knowledge and the exercise of judgment in the preparation of material from written and verbal instructions, rough draft and machine transcription.

Legal Shorthand 1

This course provides the student with a review of the theory and general dictation, along with an introduction to general teminology from a law office. Particular emphasis will be given to the learning and creating of shorthand outlines for basic legal procedures, together with wills.

Prerequisite: Shorthand – 60 w.p.m.

Legal Shorthand 2

The continuation of the legal shorthand course will provide the student with the ability to take dictation with emphasis on increasing vocabulary and speed. Real Estate is the principal area of expertise stressed in this course. Sustained dictation will also be introduced in this portion of the course.

Legal Shorthand 3

Litigation and corporate language will be emphasized in this last segment of the legal shorthand course. Business and technical phrases will also be underscored. Evaluation of progress will be based on the student's ability to take dictation at sustained and increasing rates of speed for a stipulated period of time.

Managerial Accounting

This course provides an introduction to some of the financial tools available for use in managing a business. It is concerned with the use of financial information rather than the accumulation of financial data. The principle areas studied are: an introduction to cost accounting, funds flow, budgeting and consolidations.

Manufacturing Operations

This course provides an overall view of production operations management. The major areas covered will be production planning, production control, plant layout and materials handling, methods analysis and motion and time study. The objective of the course is to give the student a working knowledge of the production aspects of a manufacturing organization within the operations department.

Marketing Administration

The planning of alternative marketing strategies is essential to successful business. Students will learn to use management techniques and skills currently being employed by leading companies so as to critically evaluate these strategies and make basic management decisions. As advanced management simulation presents realistic marketing problems to students for analysis and solution.

Marketing Research 1

The course will examine the role of Marketing Research as a tool of the marketing process. Emphasis will be placed on the basic concepts of research designs, implementation and data analyses. The course will provide a foundation for the advanced Marketing Research 2 course. A major project will provide the opportunity to apply the learning to a real business situation.

Marketing 2

Marketing 2 is a continuation of Marketing 1. On completion of this course, students will be able to: demonstrate an understanding of marketing planning; formulate a marketing mix; evaluate a marketing effort.

MathPac/AlphaSort

The student will learn to use specially designed software packages for numeric and alpha records processing. Hands-on applications of advanced techniques will enable the student to understand the many capabilities of alpha and numeric files.

Medical Administrative Procedures

The course provides an introduction to administrative procedures in today's technological office environment. It is designed to provide an understanding of how offices operate and the various functions people in an office perform.

Emphasis is placed on developing supervisory techniques to become more effective in working with people, and handling administrative responsibilities related to executive secretarial positions.

Medical Machine Transcription 1

This course provides transcription practice using basic medical vocabulary material. The emphasis will be on good transcription techniques. Rules of punctuation and grammar will be reviewed.

Prerequisite: Keyboarding – 50 gwpm (within 4 errors)

Medical Machine Transcription 2

This course is a continuation of Medical Machine Transcription 1 and provides increased specialized medical vocabulary taken from Hospitals, Worker's Compensation and doctors' files. The objective is to increase the student's accuracy and speed on transcription equipment.

Medical Machine Transcription 3

This is a continuation of skills acquired in Medical Machine Transcription 2. The emphasis will be on transcription from tapes providing exposure to multi-cultural accents. This authentic material comes from Hospital medical records departments, clinics, and doctors' offices.

Medical Office Procedures 1

The areas covered in this course are career opportunities, telephone procedures, appointment scheduling, reception, OHIP billing, preparing medical histories, lab reports, etc. The student will be given simulations utilizing medical terminology.

Medical Office Procedures 2

The content of this course allows the secretary to apply the knowledge acquired in Medical Office Procedures 1. Workers' Compensation Board claims, and banking; making deposits, petty cash, daily earnings, records, etc.

Medical Science 1

The student will be introduced to the many word elements that combine to create medical words, phrases, plurals and abbreviations in current use. Radiology, nuclear medicine and oncology require specific terms which will add to a fast growing medical vocabulary. The body as a whole and musculoskeletal systems mark the beginning studies of anatomy and physiology and the semester ends with the analysis of a medical paper, to illustrate how medical words are used by the members of the Profession.

Medical Science 2

Study of the body systems continues from integumentary through cardiovascular, blood and lymphatics, respiratory, digestive to psychiatry. Pharmacology relating to pathology in each body system, adds to the growing knowledge of the medical language. Skill in speaking, writing and understanding terminology is stressed.

Medical Science 3

The remaining body systems, nervous, genitourinary, male and female reproductive, endocrine and special senses, along with the pharmacology and pathology of each, completes the study of medical science and the building of a human being. The graduate will have acquired medical language skills.

Methods Improvement

A look at the tools, techniques and philosophies behind the various programs existing in business and industry that attempts to achieve improved work methods. Whether called methods improvement, work effectiveness, methods, analysis, cost reduction, value analysis, systems and procedures or suggestion system, the title doesn't matter. They all have the same ultimate goal—more effective working methods. In today's business and industry, being cost-conscious is a necessity.

Notetaking For Business

This course provides a rapid method of notetaking by use of a combination of longhand letters and symbols. The student learns the complete theory and is able to take simple dictation, which is transcribed at a typewriter in a simulated office environment.

Prerequisite: Keyboarding 40 gwpm (30 nwpm).

Office Administration Procedures

This course provides advanced training in medical office procedures, specifically in handling the administrative responsibilities related to secretarial positions in doctors' offices, hospital departments, medical clinics and pharmaceutical firms.

The objective of the course is to develop administrative skills with emphasis on techniques to become more effective when working with people.

Office Communications Networks 1

The purpose of this course is to give the student an in-depth exposure to developments and skills that will be vital to meeting the increasingly demanding job market requirements of the automated office of the 1980s. The concepts part of the course has been designed to present the latest technological innovations enabling the student to become conversant with the most important trends and terminology in the word/information processing area.

Prerequisite: Word Processing and Concepts 1

Office Communications Networks 2

This course is designed to complete the student's detailed knowledge of word/information processing. Consideration will be given to input/output techniques (voice systems and OCR) as well as reprographics. The problems involved in the installation and implementation of a word processing system will also be explored, with respect to systems, analytical considerations, ergonomics (word-space and environment), staff training and word processing centre management.

Office Procedures

Students who enroll in this course will learn a number of office procedural skills and when to apply them. Topics will include filing procedures and systems, postal services, telephone services and techniques, and human relations.

Orientation to Retailing

Looking at any business street you will see stores of all kinds—department stores, clothing stores, variety stores, furniture stores and many others. Each is a retail outlet or store. In this course, Co-op students will study the history and development of various types of retailing, as well as learning about future opportunities in the retailing industry.

Personnel

As an introduction to personnel administration, this course covers a wide range of personnel topics. Emphasis throughout is to illustrate how line management can effectively utilize personnel concepts and techniques in administering the human resources of their respective operating area. As a result of this course students should be aware of personnel policies, procedures and programs as a staff function and their accomplishment as a line responsibility.

PL/1

This is a continuation of Introduction to Planning and deals with the more advanced aspects of PL/1 the language. Topics such as record I/O, indexed sequential and random organization for business applications will be covered.

Portfolio Presentations

For the preceding year, the Retail Co-op student will have been involved in an in-depth study of retailing through class training and the challenge of on-the-job work experience. This course will examine audio-visual techniques and seminar-planning to prepare the student for a formal presentation on the subject of their specific placement location. Seminars will be presented before a team of evaluators composed of students, teachers and personnel from the retail industry.

Principles of Purchasing

This course provides a comprehensive study of procurement practices and policies used by purchasing departments. The major areas covered will be the purchasing functions, purchasing and management objectives, purchasing systems, inventory and materials management, quality assurance, price analysis, selection and evaluation of suppliers, planning and forecasting, purchasing ethics and value analysis.

Programming Fundamentals

In this course the student will be introduced to the concepts of problem solving and programming for use in the business environment. This course provides the foundation necessary for success in subsequent programming courses. Through the use of BASIC you will learn the elements common to many business programming languages and be introduced to programming techniques essential to business application.

Programming Techniques

This course teaches the multi-faceted skills which constitute a good programmer. Included are topics on how to develop problem-solving skills, how to analyse design and write effective programs and once the program is written how to effectively test and debug the program. Although not a course in programming, a number of programming assignments will be used to apply the various techniques discussed.

Quantitative Analysis 1

This course provides the study of some sophisticated mathematical models that can be applied to business situations. These models are selected for their applicability to the various functional areas of business – production, finance, and marketing. The purpose of this course is to prepare the students for the use of practical math models in the business community and to provide the prerequisites to Quantitative Analysis 2.

Real Estate 1

The objectives of this course are to give the student experience in Registry Office procedure in Ontario and conveyancing practice in Ontario in order that the student may be capable of working in law offices or other offices where knowledge of conveyancing is required. It is anticipated that the student will work under the supervision of a solicitor.

Prerequisite: Legal Assistant's Program approval

Real Estate 2

The objectives of this course are to give the students experience in the Land Title Procedure in Ontario together with a knowledge of condominiums and landlord and tenant problems. The course is designed so that the student should be capable of working in a law office or other office where a knowledge of land titles procedure is required. It s anticipated that the majority of students will also take Real Estate 1 which deals with the Registry Office procedure. It is also anticipated that the student will work under the supervision of a solicitor.

Receivables Management

This course is designed to give the student a working knowledge of the technical area of the credit and collections function. Students will acquire a broad background which will enable them to appreciate the theoretical and managerial aspects of credit and collection, which rely on related abilities.

Receiving and Inventory Procedures

Accuracy in record-keeping and a precise system of documentation are essential in the successful management of inventory in a retail store. This course will describe the procedures followed as the merchandise comes into the store, is received, and placed on the floor for presentation to the customer.

Records and File Architecture

This course is designed to show the student how to analyse, plan, design, implement and use automated record/file keeping and reporting systems. The student will be exposed to numerous variables ranging from information sources to update considerations.

Retail Accounting

Accounting is a fundamental key in understanding the performance of a retail business. This course follows the accounting cycle as it relates to the retail firm. The student will learnthe procedures used in formulating financial statements, and through the experience of reading and analysing balance sheets and income statements and will understand the basic adjustments required to run a retail business at a reasonable profit.

Retail Advertising and Promotion

Advertising and promotion often borrow the language of war. We wage promotion campaigns and aim our advertising at a target market. We plan strategies and force the competition to react with a defensive plan. It's a tough, competitive world, and the retailer must meet the opposition with careful analysis and be able to coordinate wise promotional decisions. The student will study the production of various retail promotions, with attention to scheduling, evaluating and working with experts in the field.

Retail E.D.P.

This course presents an introduction to the computer as used in the retail environment. Consideration will be given to various hardware such as CPU, direct access devices, terminals, POS, computer output microfilm, etc. Since software is needed to successfully implement the hardware, this aspect of the computing industry will also be considered.

Retail Mathematics

Math is very much a part of the science of retailing. Fortunately, it is a skill which virtually anyone can master with a little patience and practice. The Co-op student will learn the keys to understanding how retailing principles work in order to generate a profit.

RPG 2 (Report Program Generator, second edition)

This course provides instruction and experience in a variety of business applications using the RPG 2 language. Exposure to the language will be through lectures and programming applications ranging from simple reporting programs to the more complex area of full processing.

Sales and Selling Skills

Success in the retail business depends largely on salespeople. Many kinds of merchandise might sit on the shelves forever without sales people to show customers how products meet their needs and wants. Selling is an art, but it is an art which can be learned. The Retail Co-op student will learn the necessary skills in order to successfully follow each step of the transaction, from the initial approach to the customer, through to the closing of the sale.

Sales Promotion

This course provides the student with a knowledge of the tactics used by businesses today to stimulate increased sales and promotional activity, both at the consumer and trade level. Emphasis is placed on consumer products and services, although some attention is paid to industrial promotion. The objective is to develop a familiarity with a host of different types of devices that are available, as well as an ability to compare and evaluate their relative effectiveness.

Selling/Sales Management

Management in a retail firm has the responsibility of getting things done through people. This is accomplished through staffing, training, and motivating those who make up the firm. This

course has been designed to give the Co-op student background information on the problems involved in staff scheduling and sales staff productivity. This second course in sales will emphasize the management of human resources through analysis.

Small Business Management

This course has been prepared for students who someday may be owners and/or operators of independent businesses.

Starting a New Business

On completion of this course the student should be conversant with the mechanics of small and new businesses; have developed a logical, analytic and practical business plan, and to be in an advantageous position to consider and evaluate a new business venture.

HEALTH SCIENCES and HUMAN SERVICES

Store Planning and Merchandising

The job of creating a unique personality or store image for the retail establishment is much more complicated than it used to be. The customer of the '80's does not want glorious extravaganza, but convenience and honest value. The object today is to show merchandise and enhance its selling qualities through methods of grouping and lighting with the aid of colour to produce attention-catching selling space. Students will analyse the image building process and space productivity in order to relate store planning and merchandising to customers' shopping habits and preferences.

Systems Control Functions

This course is designed to give the student an understanding of the basic concepts of an operating system in a mainframe environment (IBM) with regards to 'virtual' characteristics, multiprogramming, and jobstream processing. Actual Job Control Language (JCL) statements for DOS (Disk Operating Systems) and OS (Operating System) systems are also covered.

Telecommunications 1

The student will learn the history and the basics of telecommunications, including an introduction to PBXs, interconnection and the roles and services of some of the vendors. How telecommunications will affect the Office including an introduction to electronic mail and local area networks (LANs) will also be discussed.

Typing 1

In this introductory course students will learn a structured method of typing. Introductory typing encourages accurate keying of numbers and symbols as well as letters, thus developing a sufficient skill in typing for personal use and building a foundation for further development of the skill.

Typing 2

Students enrolling in this course will expand their typing and communication skills. The content of this course will include: centering, tabulations, duplicating, correspondence, manuscripts, typing of forms and speed building.

Visual Merchandising and Display

Display designers are integral members of modern merchandising teams. The way in which goods are placed on viewin a store can be the key to increased sales. Because many independent retail stores do not have specifically trained display personnel to arrange their merchandise in a professional manner, it is often necessary for the owner or manager to peform this function. This course is designed to give the student the practical how-to-do-it basics of display. The student will examine the creative planning, costing and actual building of the display, and participate in practical workshop assignments to experiment with various display techniques.

Wills and Intestate Succession

This course is designed to familiarize the student with some of the language of wills, estates and succession duties, including the documentation involved, the procedures and some relevant substantive and procedural law. The objective for the student is to be able to effectively seek employment in any one of the several fields involved in processing the estates of deceased persons, including trust companies and government departments.

Word Processing

This course provides a general introduction to the theory of word processing, as well as hands-on instruction. Students are introduced to all basic operations, as well as the more frequently used advanced operations. Typing skills are a prerequisite.

Word Processing and Concepts 1

This course is designed to provide each student with word processing concepts, the resulting effects on the office of today, including word processing and hands-on experience, electronic mail, document storage and retrieval systems.

Prerequisite: Keyboarding - 40 gwpm minimum (30 nwpm).

Health Sciences and Human Services

Abused Child, The

Child abuse has become a serious problem in our society. This course will focus on some of the common reasons why it occurs. We will also discuss the signs that teachers can look for when they suspect abuse and what the responses should be.

Adaptation Nursing 2

This course deals with complex health problems. Students will increase their repertoire of approaches and skills required to support or modify maladaptive responses for various age groups. Moral and ethical issues related to complex health problems will be explored.

Adaptation Nursing 3

This course introduces the student to major health problems. Appropriate nursing interventions for major maladaptive responses will be discussed.

Administrative Procedures

Students will become familiar with the basic principles and procedures of administering a nursery school or day care centre. Special attention is given to the requirements of the Day Nurseries Act. A hypothetical day care centre will be created and procedures, problems and concerns common to the set up of new schools will be explored.

Advocacy in the School and Community

This course explores and examines methods of working with preschool children with special needs in the community, home and school. Students will learn to be an effective resource consultant to classroom teachers; establish priorities and coordinate programs in the home and school; support parents in handling and overcoming difficulties; and, develop liaisons with other agencies serving the family.

The course assignments will involve work with children, their families, teachers and other professionals. Each student will be responsible for locating appropriate families and obtaining permission to work with them.

After-School Programming For 6-10 Year Olds

Many day care centres now provide after-school care for the school-age child. The skills and needs of this age group differ from those of the preschool child. This course will focus on the kinds of activities that would interest the child and aid him in his regular school program. Included are activities that deal with fine and gross motor abilities, social games and intellectual games.

Aging Process, The

An overview to the study and theories of aging, it will integrate concepts from physiology, sociology and psychology to focus on factors affecting the aging process. Aging will be explored as the final stage of life on a continuum of human development. Health and health deviations, social and cultural attitudes affecting the elderly will be discussed. An overview of community service delivery to the aged will be explored. The problem-solving process will be used as the method of involvement with the elderly client.

Ambulance Maintenance Operation and Safety

With technological change comes the effect of mechanical, electrical, chemical and structural advances in the field of pre and post- hospital patient transport. An awareness of possible problems and their appropriate preventive measures is essential for successful patient transport. This course will concentrate on vehicular equipment, operations and environmental care.

Ambulance Service 1

This course provides the student with background knowledge in areas of administration, communication and law.

Ambulance Service 2

This course provides practical experience in the ambulance service and in emergency patient care situations in the community. Students will participate in and analyse emergency situations which will form a basis for their professional practice in the future.

Anatomy and Physiology (RNA-OR)

Content is planned around body structure; dynamics and functions; and the traumatic and pathological processes calling for surgical treatment. This helps the student to understand the rationale underlying care and cure processes.

Application of the Rehabilitation Process

This course will be directed toward the theory, processes, systems and resources used in developing an individual program as applicable to the individual's needs and maximum potential. Focus will be on a vocational or other area plan using comprehensive goal planning techniques, including the study of behavioural and performance objective(s) setting. The principles and techniques of behaviour modification will be dealt with, as well as continued emphasis on observation techniques.

Applications in Emergency Patient Care

This course involves a continuation of the field-placement in the ambulance service. This will allow the student additional exposure to emergency patient care settings and allow refinement of practical skills.

Applications of the Nursing Process

This course integrates the theory of nursing process with the clinical application of that theory. The nurse will see assessment, planning, implementation and evaluation as ongoing processes of patient care. In the development of these components of nursing process, the nurse will be developing her skills in: decision making, verbal and non-verbal communication, history taking, sensory perception, making nursing diagnosis, development of patient-care plans, and documentation.

Nurses completing this course will be able to apply the nursing process in their current work setting and relate additional educational experiences to this content.

Assessment and Evaluation

This is a study of the most appropriate assessment techniques for a wide variety of settings and the application of test findings in the design of individual programs. Topics will include the principles and purposes of assessment and evaluation; the characteristics and methodology of assessments; the criteria for assessment selection; and consideration of specific assessment types such as psychometric, physical, performance and work sample measurement approaches. Considerable emphasis will be placed on work observation measurements and work sample assessments.

Assessment of the Well Individual

This introductory course introduces the concepts and methodology which are necessary for the student in the first stage of assessment of the individual's adaptive responses in life. The course consists of four modules: introduction to nursing, Roy's model and nursing process, adaptive modes and holistic care.

Basic Anatomy and Physiology for Nursing

The main objectives of this course are to assist the student to understand the structure and function of the normal processes of life; and appreciate the relationship between cells, tissues, organs and the growth of the human organism in health throughout the lifespan. Principles of the microbiology are also included.

Basic Nursing Practice

This allows the student to practice skills appropriate to the assessment of well individuals across the lifespan. The student will have the opportunity to implement measures which promote wellness and maintain health of selected individuals and their families. Experience is provided in community agencies, including acute and chronic-care hospitals.

Basic Work Skills

You will review activities that constitute basic work skills. Reasons are explored to answer the question why special-needs groups are considered disadvantaged. Concepts of adult learning, specific problems of life skills content and models are also presented. This life-skills approach is contrasted with concepts of job readiness and affirmative employment models.

Behavioural Foundations 1 and 2

Several aspects of human behaviour will be reviewed with an emphasis on the physiological, social and cognitive determinants of behaviour, in the first semester, and on the effects of cultural forces on collective behaviour in semester 2.

Cell Physiology

Cell Physiology will familiarize the student with various chemicals used in embalming, the physiological principles which apply to the movement through cell membranes, and the effects of chemicals found in embalming solutions on cellular constituents.

Child Abuse

This course will focus on some of the common reasons why child abuse occurs in our society. It will also elaborate on the signs that may indicate abuse, and the pertaining laws surrounding this problem.

Child Care Work Methodology 1 and 2

These courses deal with: The child care worker's role; the emotionally disturbed child or adolescent, what his problems are and some of the reasons for this; the relationship sought between child care worker and child/adolescent; practical day-to-day problems faced in child care and ways of handling them; various and sometimes conflicting philosophies of treatment. The emphasis will be on the development of practical child care work skills.

Child in the Family

This is a study of the many aspects of parent-child relationships within the various patterns in which families are organized. These relationships to the development of the child as an individual will be analyzed and discussed. This knowledge will be used by the students in their professional approach to assist the parents in their care as well as to understanding the children themselves.

Child Observation

This course emphasizes objective observational techniques as basic tools for assessing children and developing and evaluating their programs. Students will explore the philosophy behind the regular use of observations and will be given the opportunity to write reports using the necessary writing skills. Topics will include operational definitions and the basic format of individual program plans. A large component of the course will consist of laboratory sessions in the Humber College Day Care Centre.

Child with Special Needs 1 and 2, The

This course will give students a background knowledge of children with special needs. These children may be encountered in a regular/ integrated/segregated preschool or day care setting. It will include observation of early signs of atypical development, the characteristics and demands of a child with special needs. The second semester is an introduction to mental retardation and associated handicaps. Emphasis is placed on definition and classification of mental retardation, causes and characteristics essential for programming and preventative measures and methods of early diagnosis. Teacher skills and attitudes will be a focus.

Child with Special Needs 3 and 4, The

Students will identify and understand a variety of developmental disabilities. Teacher guidelines, strategies and techniques are the major emphasis.

Clinical Field Experience

This field experience in a clinical setting (institutional setting) will depend upon the student's area of employment/interest as well as an area of practice with which the student is unfamiliar. The student will be assigned to a clinical advisor who will act as supervisor.

Cognitive Development: Theory and Practical Applications in Early Childhood Education

This course is designed to provide teachers with current thinking on cognitive development. The major emphasis will be the work of Jean Piaget and how his findings relate to the developing child. The course will develop a theoretical base and will then make a transfer to practice. The majority of class time will be spent in developing approaches for implementation.

Communications 1 (Health Sciences)

Communications is designed to help you develop the writing and speaking skills which become an invaluable asset in meeting the requirements of the College and the Health Science field. You will master basic research and writing techniques and be required to write clearly and simply. You will try to develop a concise, concrete and logical style. You will also learn effective speaking techniques which will give you the confidence to handle the essential tasks required by your job.

Community Field Experience

This field experience in a community setting will depend upon the student's area of employment/interest as well as an area of practice with which the student is unfamiliar. The student will be assigned to a clinical advisor who will act as supervisor.

Community Health

All health students will get a better understanding of health as it relates to themselves and to the community. It focuses on the delivery of health care as it relates to local, provincial, and national organizations and settings. This course examines the roles of health workers and, through seminar sessions, helps students consider current health problems as well as preventative, curative, and rehabilitative aspects of health care delivery.

Community Pharmacy Prescriptions

Students will be introduced to dispensing procedures for medications such as will be encountered in retail pharmacy and for out-patient dispensing in hospitals. All classes of medications will be available in a model dispensary, and students will be re-

quired to dispense a prescription, price it, and maintain a patient record. A case study approach is adopted to make this more meaningful. In addition, the student will be required to know the drug regulations pertaining to each prescription. This course is a prerequisite for all second-semester vocational subject.

Community Pharmacy Work Experience

Time will be spent in field placement in a community pharmacy where students will participate in all aspects of the role of a dispensary assistant in that setting.

Community Resources

Students will get familiar with many community resources so that they may establish contact with an appropriate agency if and when their services are necessary. The students will become aware of what services are available within their community and how these services can be fully used.

Comparative Studies in Early Childhood Education

There are many different themes and methods dealing with how to teach children. Some of the older and newer theories will be discussed along with the reasons for their importance and their relationship to the method taught at Humber College.

Computer Prescription Records

Students will prepare a minimum of 250 prescription records using computerized pharmacy systems.

Coordinating Resources

This course is designed to help students develop the skills necessary to independently conduct research into specific areas of children's special needs and to effectively communicate the results to others. The course will provide opportunities to integrate program content and to make plans for continued professional developments.

Counselling in Family Planning and Sexuality

This course concentrates on counselling skill in the area of family planning and sexuality using a variety of examples. Students will combine theory with supervised practice in individual and group counselling. The course will be taught using role-playing and micro-counselling techniques. Students are encouraged to develop their own personalized counselling stance and will have to be familiar with the main approaches to sex counselling.

Counselling Techniques 2

The emphasis in this course is on the acquisition of skills to become an effective helper. Several counselling models will be examined and various elements of the counselling process will be practiced through role playing.

Creative Activities Workshop 1 and 2

This course will study the theories behind creativity of young children, focusing on a variety of creative materials. It will help the student plan and establish appropriate stimulating activities for all types of preschool programs. This should ensure a healthy learning environment for the development of the child. Classes will offer the opportunity to learn theory, exchange ideas and practice skills in a working environment.

Curriculum Planning & Resources

Students will be exposed to a variety of tools, techniques, materials and services in the education of exceptional children from 0-12 years of age. As much as possible, this will be practical in nature and geared to improving the teaching techniques of the individual student and broadening the exposure to educational material. Curriculum plans and the use of flow charts will also be studied.

Development of Home Programming

Increasing numbers of children with special needs are being integrated into regular day care settings. Whenever possible, programming in the centre is followed up by individual home programming. This course will provide the student with some of the knowledge and skills necessary for the home component.

Developmental Activities 1 and 2

This course puts the developmental theory into its practical application. Programming for infants, children and adults with special needs, is taught through a multi-faceted approach, using discussions, resource people and a hands-on approach. The use of age-appropriate activities in a therapeutic, educational or vocational mode is a major emphasis. Students will learn to develop a program for individuals and groups at different functioning levels in various settings.

Developmentally Appropriate Activities

The emphasis in this course will be on: reviewing knowledge of developmental sequence and the interdependence of prerequisite skills in all areas of development; assessing the present functioning level of children in each area of development; participation in workshops involving implementation of activities to enhance development of specific skills.

Effective Supervision and Communication

The topics to be discussed include: budgeting, purchasing, scheduling, interviewing and assessing staff, in-service training and professional development.

Elements of Human Behaviour 1 and 2

The basic concepts involved in the study of psychology in general and human behaviour specifically will be outlined. Particular aspects of behaviour are studied to enable the student to understand the patterns within the "normal" range.

Embalming Lab 1

Embalming Lab will involve the use of hypothetical cases assigned in class as well as presentations, by student groups, of cases which have been embalmed.

Embalming Lab 2

This lab will further acquaint the student with embalming techniques. Groups will be withdrawn from scheduled classes for laboratory practice.

Embalming Theory 1

The responsibilities of funeral service personnel are related to the technical aspect. The historical development and theoretical principles will also be covered.

Embalming Theory 2

Embalming Theory 2 will expand on the Embalming Theory 1. Disease processes and their influence on em-

balming procedures will be examined so that the student, after consideration of the theory, can select the most appropriate procedure to follow.

Emergency Patient Care Lab 1

This course will provide students with practical experience in a number of chronic care settings. The lab work is designed so the students can use the theory studied in Emergency Patient Care 1 and develop basic patient care skills.

Emergency Patient Care Lab 2

Students learn in many hospital areas how to care for patients, especially in acute and emergency situations.

Emergency Patient Care Seminar

This course is offered concurrently with Emergency Patient Care 2 and will review the theory and refine practical skills in Emergency Patient Care.

Emergency Patient Care 1

This course introduces the student to the basic principles and skills which form the basis of patient care to be studied in subsequent courses.

Emergency Patient Care 2

Emphasis in this course is placed on the development of an understanding of disease processes and trauma, their basic pathophysiological features, their clinical manifestations and management in the pre-hospital setting.

Ergonomics 1

Progressing from Structure and Function of the Human Body, a scientific study of the physiological, anatomical and psychological aspects of man and his work environment, with particular reference to the rehabilitation setting. This course will consider the interrelation of ergonomics and pharacotherapeutics. Topics will include basic principles and language of pharmacology, classification of drugs commonly prescribed, medication and drug action, role of and legal implications for the rehabilitation worker, drug abuse, treatment and prevention.

Ergonomics 2

This course will focus on the prevention and control of occupational injury and illness, property damage, security breaches and environmental factors such as pollution. The basic principles and legal aspects of loss control management and the establishment of general and disability specific safety programs in a variety of rehabilitation settings will be included, as will be a specified program in First Aid training.

Extended Care Programming

Day Care has expanded in such a way that there are often more than just 2 to 5 year olds at a centre. This course explores program ideas for the infant and the school-age child. Also included are additional innovations for the preschoolers.

Family Dynamics

This course will deal with the complexities of family relationships. The role of mother, father and child will be discussed as well as the changing concept of family in today's society. Families with special needs and their problems and pressures will also be covered.

Family Dynamics 1 and 2

This study of the family from a systems viewpoint will include systems theory, the family life cycle, roles, triangles, communication, task accomplishment, feelings, control, power, networks, and reciprocity. Role playing and experiential exercises will be used to develop conceptual and perceptual skills in assessing family dynamics.

Field Placement Practicum

This component of the program provides the students with the opportunity to broaden their experiences beyond those acquired at work or in the classroom.

Field Practice 1 (Mental Retardation)

This course will provide the students with practical experience and observations to introduce them to the services in mental retardation. This is accomplished by on-site visits to different agencies as well as a compulsory four-week placement in an agency associated with the program.

Field Practice 1 and 2

Students will spend one full day each week in a nursery school or day care setting under supervision. They will also do a one-week block placement in the Humber College Day Care Centre and in the Humber Developmental Centre.

Field Practice 2 and 3 (Mental Retardation)

As a follow up to the orientation experience of Semester 1, the student will participate as an assistant to a counsellor in programs for individuals who are retarded or physically handicapped in different community agencies.

Field Practice 3 and 4

The student will spend two days a week working in the community. One of these placements will be in a Metro Toronto day care, the other, in a special setting. In addition, one week each semester will be spent in the Humber College Day Care Centre, and one week of either semester in the Developmental Centre.

Field Practicum 1 (Post Diploma - ECE)

The student will be helped to integrate theory and practice by working in an integrated setting for 105 hours of supervised field placement. Students will observe and analyse the role of the resource teacher and work as a team member with staff to assess, plan, implement and evaluate Individual Development Plans.

Field Practicum 2 (Post Diploma - ECE)

Students will be helped to integrate theory and practice by working—over an extended period of time—with young children and their families for a total of 105 hours of supervised placement. Minimum placement time will be twelve weeks. Students will prepare, implement and evaluate long-term individual developmental plans using input from families, staff and other professionals; help families meet their special needs throughout this long-term placement; and demonstrate, through home visits and professional consultants, the ability to integrate individual developmental plans with the family's perspective.

Field Practicum 3 (Post Diploma - ECE)

The student will integrate theory and practice by applying the cumulative skills from this program. This will involve working as a member of the team, demonstrating leadership, problem-solving abilities and consultative

skills. This field practice will be an opportunity for students to work more intensively in an area of special interest.

Field Work 1 (Child Care Worker)

The student will spend two days a week in settings for children and adolescents with emotional problems. This will take place in residential treatment centres, group homes, special nurseries, etc.

Field Work 1 and 2 (Early Childhood Education for the Developmentally Handicapped)

Students will spend one full day each week in a day care or nursery school setting. The students will also do a one week block-placement in the Humber Developmental Centre and in the Humber College Day Care Centre.

Field Work 2 and 3 (Child Care Worker)

The student will spend two days a week in settings for children and adolescents with emotional problems. This will take place in residential treatment centres, group homes, therapeutic nurseries, etc.

Field Work 3 and 4 (Early Childhood Education for the Developmentally Handicapped)

The Field Work consists of exposure to several settings including nursery schools for children with mental retardation, facilities providing services to children with physical handicaps and emotional disturbances, as well as programs for infants with special needs and adults with severe to profound mental retardation. In some cases, other placements are considered provided they address the needs of children with exceptional problems. Placements are done either two mornings per week, one full day per week, or one full day and one-half day per week, depending on the need of the placement. There is aso a one week placement in the Humber Developmental Centre per semester and another in the Humber Day Care Centre, either during semester 3 or 4. This course is practical and is one of the core courses of the program.

Field Work 5

During May and June at the end of the first and second years, students will work in settings approved by the program coordinator to improve their teaching skills. The first session will be spent with children who have special needs and the second session with non-handicapped children.

Fieldwork 4 and 5

The student will spend three days a week in settings for children and adolescents with emotional problems. This will take place in residential treatment centres, group homes, therapeutic nurseries, schools, community centres, out-patient clinics, etc.

First Aid & Health

The aim of this course is to enable the student to deal with emergency situations as well as creating an awareness of the basic considerations of health and illness.

Group Theory 1 and 2

This study of group dynamics examines what occurs in groups and why, how to deal therapeutically with groups of children in solving problems and resolving conflicts. Various techniques will be studied in working with groups. Use will be made of the class group itself for experiential learning.

Hospital Pharmacy Dispensing

You will gain practical experience in modern methods of drug distribution. All aspects of unit-dose and individual patient prescription dispensing and profiling will be encountered.

Hospital Pharmacy Procedures

Students will receive instruction in hospital organization, departmental responsibilities, methods of inventory control, drug distribution and record keeping.

Hospital Pharmacy Work Experience

Students will be assigned to a hospital pharmacy where they will be exposed to methods of drug distribution, inventory control, various aspects of record keeping, out-patient dispensing and other facets of hospital pharmacy procedures.

Human Anatomy& Physiology, Introductory

This course, required for all post-secondary programs in the Health Sciences Division, is designed for the student with limited background in this area. Structure and function of the human body will be discussed to provide a background which will enable the student to understand the basic concepts of health and of disease.

Human Growth & Development 1 and 2

This is a study of growth and development from conception to adulthood. The course will examine basic developmental concepts and principles and their relation to the growth of the complete individual. Particular emphasis will be placed on normal development of the preschooler and school-age child. Classes will consist of open discussions, lectures and films.

Human Growth & Development 1 and 2 (Mental Retardation)

The primary purpose of these courses is to introduce the student to the entire life span. It is concerned with the normal and abnormal and encompasses the study of the growth, behaviour, and the development of mental, physical, social and emotional aspects as well as patterns of maturation in the individual.

Human Physiology 3

The subject matter will emphasize cardiac physiology and the interrelationship of major physiological processes which influence cardiac function. Consideration will be given to the role of control mechanisms involving the nervous, respiratory and renal systems; high-lighting acid-base, and fluid-electrolyte balance.

Human Physiology 4

The subject matter will appeal to health professional having an interest in the management of trauma and medical emergencies. Emphasis will be placed on respiratory physiology and the interrelationship of other major body systems which influence respiratory function. Consideration will be given to the influences of the cardiovascular, nervous and renal systems.

Human Relations (Ambulance and Emergency Care Program)

This is a study of interpersonal relationships with individual patient, or groups of patients, their families and other members of the health care team. The course will also focus upon self-awareness and understanding stress and its manifestations, crisis intervention interactions with individuals and groups.

Course Descriptions

Human Relations (RNA-OR)

A specialized course in Human Relations is included in this program. The major emphasis of the course deals with specific work situations, difficulties of close team cooperation both to the individual and the team, the effects of stress, ways of resolving interpersonal conflicts and effective communications.

Individual Developmental Planning 1

This course examines the preparation of individual developmental plans. Students will learn to assess individual children's development levels; utilize assessment tools appropriately; develop objective and specific developmental goals; teach goal-directed lessons; integrate the individual child into the group and evaluate progress.

Individual Program Planning

This course will introduce students to the concept of individual program planning, its components, function and application. Functional assessments, program format and methods of data collection will be examined and critiqued. The main approach to this course is the lecture format.

Infant-Toddler Programming

This course will take a look at the types and quality of care available for infants and toddlers. Topics will include: age-appropriate programming and activities; discipline; indoor and outdoor equipment; physical exercise; nutrition.

Integration: Community-Based Services

This course will examine the concepts of normalization and integration and their implications for the future development of children's services. The impact of the community itself will be discussed. We will examine various approaches to the development of integrated educational programs and critical issues yet to be resolved in the overall movement towards integration. Classroom sessions will primarily be discussions to allow input from as many perspectives as possible so that students may become conversant with the major issues surrounding the development of children's services.

Integrative Seminar 2 and 3 (Child Care Worker)

This seminar provides students with the opportunity to integrate theoretical course material with their own development as individuals and as Child Care Workers, using their field work experience as a focus. The class is issue-oriented, dealing with material brought out by the students from their experiences in the field.

Integrative Seminars 1, 2, 3, 4

This course gives students an opportunity to discuss the field and block-placement experience with their field supervisor. The format may also include demonstrations, films, guests and small group discussion.

Introduction to Adaptation Nursing 1

This course builds on the student's knowledge of the nursing process. Simple health problems have been selected for discussion. Approaches to support or modify client responses will be explored and moral and ethical issues in nursing will be examined.

Introduction to Mental Retardation 1 and 2

These two semesters will undertake a thorough examination of: the historical development of the field of mental retardation; causes of mental retardation; psychological problems associated with mental retardation; preventive measures; socio-cultural factors giving rise to pseudo-retardation.

Introduction to Resource Teaching

This course will introduce students to the role and function of resource teachers, provide a philosophical basis for integration and normalization, examine the current legislation affecting the care and education of children with special needs, and explore modes of using community resources effectively.

Keyboarding (Funeral Services)

Students will learn to use the typewriter for the production of basic letters, memos, tables and business forms.

Keyboarding (Pharmacy Assistants)

Students will be given instruction in typing and office procedures. The emphasis will be on accuracy and attention to detail since these abilities are essential to the job.

Language Development in Young Children

This course will deal with language development and the role of the adult in promoting language skills. The student will study how the child acquires the ability to talk and what factors may hinder normal development. Topics include: programming for good language development; recognition of language problems; when and where to refer children with problems; the teacher's role in speech therapy.

Leadership in Nursing

This eight-week course will examine various theories of leadership and the nurse's role as a change agent. The student will be made aware of the nurse's responsibility as a leader within the health care delivery system.

Leadership Skills

This course is intended for those working in a variety of settings. The issues of leadership related to working within a health team will be explored.

Lifespan Development

You will study human growth and behaviour from conception to old age. "Normal" patterns of growth will be examined as a framework for differentiating a typical behaviour and development. This will help you understand human needs and problems.

Microbiology

Students will be introduced to the basic concepts of microbiology. Special emphasis will be placed on the study of pathogenic organisms, infection control, methods of sterilization, and in the treatment of infectious diseases.

Moral and Ethical Issues in Health

This course covers a survey of major health issues which pose serious ethical and moral questions to health care professionals and to the community at large. Through class lectures and discussions, readings and assignments, the student will be prepared to

identify problems and clarify ethical and moral values in health issues.

Music and Creative Movement

The major areas of emphasis will be on: enhancing the student's repertoire in traditional early childhood music and in folk music; practical sessions focusing on how the child expresses his thoughts and feelings through the use of his body. Topics will include; use of space; body awareness; planning appropriate creative movement experiences for young children.

Normalization Within the Community

An examination of the community and its relationship to the person with special needs is the focus of this course. Existing agencies will be discussed in terms of their function, and how they fit into the overall structure of the community. The organization of government resources will also be examined. The concept of people with special needs being viewed as deviant will be discussed, as well as normalization and integration in terms of potential effect on the community at large, and people with developmental handicaps in particular. The students will be examining their own attitudes and beliefs towards people with mental retardation and handicaps.

Nurse as Leader, The

The clinical component of this course will let the student apply the nursing process in more complex situations. Students will be expected to assume beginning leadership responsibilities.

Nurse as Practitioner 1, The

The clinical component of this course will encourage students to apply their acquired knowledge and skills in various settings. Simple health problems will be the focus for nursing intervention.

Nurse as Practitioner 2, The

Through the laboratory component of this course, students will apply their acquired kowledge and skills in a variety of clinical settings. Complex health problems encountered across the lifespan will be the focus for nursing intervention.

Nurse as Practitioner 3, The

The laboratory component of this course provides further opportunity to apply the acquired knowledge and skills in a variety of clinical settings. Major health problems encountered across the lifespan will be the focus for nursing interventions.

Nutrition and Health

This course aims to familiarize the student with the importance of good nutrition and health in preschool centres. It is designed to develop an understanding of health regulations including basic first aid, childhood diseases, and general health standards as stated in the Day Nurseries Act. The course will also examine the nutritional needs of the young child and explore how preschool environment can meet those needs.

Orientation to Funeral Service 1

This introduction to Funeral Service as it is practised currently in North America, will review the history and evolution of the profession. Customs are compared with those of other countries. Past, present and future roles of the funeral director are discussed. The students are introduced to funeral service procedures, practices and equipment common to most funeral home operations in Canada. Students develop some specific skills regarding equipment use.

Orientation to Funeral Service 2

After Orientation to Funeral Service 1, students will continue to learn about funeral service procedures and practices as well as religious and fraternal rites and rituals. Current and future roles of the funeral director will be discussed in relationsihp to these practices. Students will develop some basic skills regarding arrangements counselling.

Orientation to Pharmacy

This course will familiarize students with all aspects of pharmaceutical legislation relevant to their duties, materials handling and purchasing procedures, drug distribution systems, third-party prescription plans, computer and patient record systems in pharmacy. The relationship between professional staff and other paramedical staff will also be discussed.

Parent-Teacher Relationships

This course will be structured to provide advanced level training for teachers in relating to parents. It will assist the teacher in developing effective communication skills: a better understanding of parents and their needs; planning and providing orientation and in-service training for participating parents; developing appropriate parent education programs.

Pathology

This course is an overview of the major diseases affecting the organs of the human body. Special attention will be paid to the pathological conditions existing at death, which might affect the embalming process. There will also be discussions on the roles of the pathologist and coroner and their interaction with the Funeral Director.

Patient Assessment

This 60-hour course will assist the nurse in developing pre-existing skills in obtaining patient histories, interviewing and performing physical examinations. Emphasis will be placed on developing additional skills and abilities in distinguishing normal from abnormal findings. Supplemental anatomy and physiology will be reviewed for various age groups. The student is expected to take an active part in small group discussions and laboratory/practice demonstrations.

Pharmacy Science 1

This course introduces various aspects of physical, inorganic and organic chemistry which relate to the preparation and use of all classes of pharmaceutical dosage forms. Laboratory experience will highlight lecture material.

Pharmacy Science 2

Pharmacy Science 2 will introduce the student to the effects of drugs on the human body, to the pharmacological classification of drugs and their use in the treatment of various diseases.

Physical Education

This course will examine the purpose and methods of achieving cardiorespiratory endurance, flexibility, muscular strength and endurance and tension-releasing exercises as they apply to the field of Ambulance Service. The problems of stress, tension, diet, obesity, heart disease and smoking will

be examined. The student will also explore the area of back problems and how they relate to exercise and lifting. Corrective exercises will be discussed.

Physiological Adaptation and Maladaptation 1

This course introduces the basic concepts of homeostasis and disease. These concepts will be expanded upon to include the adaptation and maladaptation of the reproductive and integumentary systems.

Physiological Adaptation and Maladaptation 2

This course deals with the physiology and pathophysiology of the nervous system and special senses.

Physiological Adaptation and Maladaptation 3

This course deals with the physiology and pathophysiology of the circulatory and respiratory systems.

Physiological Adaptation and Maladaptation 4

This course deals with the physiology and pathophysiology of the musculoskeletal, digestive and urinary systems.

Placement Services

Placement services addresses the basic concepts, tools, policies and practices in career planning and job placement for disabled workers. In addition to lectures and guest speakers, there will be assignments to provide practical research, information and application of the subjects covered.

Pregraduate Experience

The theory allows the student to integrate and review the acquired knowledge of nursing before entering the pregraduate experience. The lab course is designed to facilitate the transition of the student nurse to the graduate nurse role. The student will be able to consolidate and apply the principles of nursing theory in a variety of clinical settings.

Principles and Methods of Motivation and Reactivation

This course will study the theories of individual motivation as it relates to the professional worker and the elderly. Specific interventions and techniques designed to motivate and/or reactivate the functioning of the older adult will be studied and evaluated.

Principles of Adult Education and Patient/Client Teaching

To acquaint registered nurses with basic principles of adult education as they apply to a variety of health-related situations including: patient care, patient/client or family health teaching, patient care conferences or clinics, in-service education, working with doctors, other nurses or health colleagues, and community education activities. Group and individual teaching approaches will be used. Course topics will be applied to various health situations and settings as the needs of the learners and of the learning group indicate.

Program Planning and Administration 1

Examination of various program methodologies used for developing group and individual programs will be the focus here. Emphasis will be placed on learning all components of individual program planning and developing functional formats for writing up, evaluating and measuring the program. Students will learn to priorize behavioural objectives and to evaluate the effectiveness of programs. Classes will consist of lectures and workshops.

Program Planning and Administration 2

Administering day care and preschool programs is the focus for this course. Different areas of administrative responsibility and practical information to determine effective managerial practices are highlighted by a thorough investigation into the Day Nurseries Act. Students will get to understand the administrative tasks, functions and issues.

Psychology

The primary emphasis in this course is abnormal behavioural patterns that the ambulance student will likely be exposed to in emergency situations.

Psychology of Grief

This course includes elements of philosophy and sociology so that the aspects of the psychology of grief may be examined from a very practical perspective. Successful completion of this course will prepare the students to deal more sensitively and helpfully with those whom they serve in the practice of funeral service.

Psychology of Infancy and Early Childhood 1 and 2

This is a study of the interaction between a child's heredity and his environment as they influence his development from conception to age six. The general areas studied include physical, emotional, social and cognitive development. Attention will be given to methods which encourage this development to achieve maximum involvement in a purposeful life.

Psychology of Later Childhood 1 and 2

Students will study the school-age child as he ventures forth from the protection of the home and adjusts to the wider community thereby developing the coping skills needed all his life. Students will continue to study the individual as he reaches adolescence and the newly identified stage of youth.

Psychopathology of Childhood 1 and 2

This will deal with the diagnosis, classification, description, causes and treatment of psychological disorders in children and adolescents.

Rehabilitation Programming

This is a review of the key players, principal issues and resources required to support rehabilitation programming for people with special needs. The issues will include identification of special needs target groups, funding sources and resource persons and prerequisite activities that must occur in the rehabilitation process. Emphasis will be placed on contrasting service delivery models such as institutional, normalization (community-based) and consumer models of service.

Rescue Procedures

This course discusses all components of vehicle rescue in conjunction with the knowledge derived from the courses: Ambulance Service 1, Emergency Patient Care 1, Emergency Patient Care 2. Theory and practical use of equipment and rescue techniques will be involved throughout this course.

Restorative Art, Funeral Service Education

The general topic of Restorative Art will be covered in each of its classifications as follows: reduction of swelling; treatment of emaciation; treatment of fractures and lacerations; treatment of

erosion; cosmetics—professional and commercial; and hairdressing and restoration.

Retailing – Small Store Proprietorship

The student will acquire a practical awareness of today's retailing scene, particularly the small independent store. It also develops learning skills in decision-making, creative research, merchandising judgment, planning, analysis, and calculations.

Seminar on The Child With Special Needs 1 and 2

In semester 1, historical, traditional and emerging perspectives, issues and approaches to the field of special education will be the focus. A survey approach to various syndromes, causes, and essential characteristics for programming will be highlighted in the second semester.

Seminar on The Child With Special Needs 3 and 4

These seminars will explore the techniques and strategies that improve the performance of early childhood educators who deal with children having special needs.

Small Business Management (Funeral Service)

To provide the student with an overview of the non-technical aspects of the funeral service profession in sufficient depth to be of obvious and tangible value, emphasis will be placed on both the practical application and the theoretic bases. The course will be supplemented with selected films, case studies and guest speakers.

Sociology 1

Sociology is a science concerned with the structure of human organization and the subsystems of human relationships. It looks for sources of human behaviour in an individual's social history. It is this interaction with other people, and the systems and institutions created and operated by people within a particular cultural environment, that plays a major part in shaping behaviour.

Special Needs in Mental Retardation

This course provides framework within which current topics, related to the care, training and education of multi-handicapped individuals, will be explored.

Structure and Function 1 and 2

The student learns the anatomical and physiological composition of the human body. Structural limitations will be emphasized with regard to daily situations for the normal and handicapped individual.

Teacher-Parent Relationships

A teacher's relationship with parents can be one of the most important, yet most demanding of her/his roles. To facilitate this relationship, all areas of communication will be examined and discussed; for example, newsletters, parent meetings and other effective means of promoting parent education. Special emphasis will be placed on understanding parents of children with special needs. The course will also examine the rights of parents, their role in the education of their children, and the various support services developed to help meet the needs of parents.

Teaching Family Planning and Sexuality

This is an opportunity to learn program design and development skills necessary to provide both structured and unstructured learning experiences in formal and informal settings. Students will gain experience through peer-teaching practice in a variety of situations. In this skills development course which will focus on teaching methods, students will be exposed to various models of teaching . The microteaching approach allows the students to design, implement and evaluate their own programs.

Teaching the Young Child 1 and 2

This course lays the foundation for all practical work with young children. It explores the philosophy of Early Childhood Education, the teacher's role, the physical setting, the importance of routines and play, communication skills and methods of discipline.

Techniques of Individual Programming

With the movement toward integration and the increased emphasis on individual programs for all children, this course is designed to introduce students to strategies involved in individual program planning. Topics include: functional assessment; goal setting and priorizing; method of instruction; models of instruction; measurement and evaluation.

Theory and Practice of Therapeutic Activities 1 and 2

This will deal with various forms of creative activities (painting, clay, paper mache, drama, woodwork, etc.), children's games, sports activities, outdoor education and camping skills. These activities will provide the student with ideas and some practical experience in carrying them out. Also included will be discussions on creative and therapeutic values of the different activities with children and adolescents. General age groups to be covered are primary, middle and late childhood and adolescence for both the disturbed and the average child.

Therapeutics 2

This course looks at the adult skilled helper and his/her attainment of maturity. It studies behavioural change through self-management and looks at the principles of adult education. By examining basic therapeutic methods with various groups of people, it leads to specific techniques used to help developmentally handicapped persons reach their potential.

Working With Families

This course focuses on work with preschool children with special needs in the home setting. Students will learn to demonstrate empathy for, and provide support to families; help families accept and understand their own special needs; aid parents in finding and evaluating appropriate treatment for their children's special needs.

Hospitality

Advanced Finance Operations

This course is a continuation of Basic Finance. It examines the financial management process using the following sequence: bookkeeping, accounting, analysis, decision making and action taking.

Course Descriptions

Advanced International Cuisine 1

This course provides a detailed study of international cooking. Students will learn the preparation of appetizers, soups, salads, meat dishes, fish dishes, poultry dishes and desserts.

A new country will be introduced each week. Students will be responsible for cooking all items on the menu. The emphasis is upon quality and economy of food preparation. Group work will be used in the preparation and cooking of the food. Throughout the course emphasis will be placed on production discipline and safety, food sanitation and personal hygiene.

Advanced International Cuisine 2

This course provides advanced study of international cuisine focusing on many countries of the world. Students will be responsible for preparing and cooking international dishes.

The Advanced International Cuisine course will increase the students' ability to cook dishes from other countries. Also practice preparation of quality food, economy, food sanitation, hygiene and professional productions.

Baking 1

Students study and practice professional baking as pertaining to the cooks trade. Students will learn bakeshop organization, sanitation, hygiene and safety in bakeshop operations, bakery ingredients and technology of products.

Baking 2

Students will perfect the knowledge of practical baking and will also learn preparations of various desserts, cake baking and cake decorating.

Baking 3

This course provides a detailed study in advanced baking as it pertains to the cooking trade. The student will perfect the knowledge of advanced practical baking of a variety of biscuits, muffins, cornbread, soft and hard rolls, the making of ices and sherbets, hot Hors d'oeuvres and savoury goods, international varieties of apple flans, soft-filling pies, Napoleon, Boston Cream pie, sponge and layer cakes. The emphasis will be on quality, productivity, cost control, sanitation and hygiene.

Baking 4

This course provides a detailed study in advanced baking as it pertains to the cooking trade. Students will perfect the knowledge of theory and practice of cakes and tortes, pastries, desserts, marzipan, gum paste, sugar boiling, wedding cakes and show piece designs. The emphasis will centre on the quality of work, productivity, and cost control.

Bar Management Theory

The student will learn the process of fermentation, distillation and beverage production through course study. You will also study wines, spirits and beers of the world with an understanding of the history, manufacturing marketing, taste and their application to various foods. The ordering, storage, management control and marketing of bar products will be emphasized.

Consumer Research 1

This is an introduction to the techniques used to determine the acceptability of food product in the marketplace. The main areas studied are sensory evaluation and development of the student's sensory skills.

Consumer Research 2

As a continuation of Consumer Research 1, other forms of research which are effective in a profitable marketing program are studied: surveys, interviews and questionnaires. Problem solving and report writing skills make this course very applicable to the needs of industry.

Food and Beverage Service

This course will familiarize the student with the role, function, job description and duties of the Dining Room Manager, Catering Manager (Food and Beverage Manager) of a hotel, restaurant, club, or industrial cafeteria.

Food and Beverage Service 2

The course will involve the student in the actual operation of a high-class licensed dining room–the Humber Room. Students will practice French and Russian table service, preparation and service of flambé dishes, queridon cookery and service, bar service, and service of international cuisine.

Food Preparation: Buffet 1

This course provides a detailed study in the preparation of buffets. Students will prepare a buffet each week under the guidance of the instructor. This will ensure that the students will learn preparation of hot and cold buffet dishes, decoration of centre pieces, garnishing buffet dishes, buffet layout for convenient service, serving buffet items to the customers, and preparation of international buffet dishes.

The emphasis is upon quality of the buffet items, showmanship, varieties of foods and the ability to work with professional tools, group work and production discipline.

Food Preparation: Buffet 2

This course is designed to teach the preparation and service of French and International Buffets with emphasis on quality, cost and variety of hot and cold dishes, creation of centre-pieces, showpieces, fat, fruit and vegetable carvings.

Food Theory 1

This course provides a detailed study of the basic theory of professional food preparation, as pertaining to the art of French Cuisine. Emphasis is placed on basic methods of cooking; stocks and soup cookery; basic sauce cookery; seasoning and flavouring foods; egg; rice; pasta; preparations of garnishes and accompaniments; vegetables and potato cookery.

Food Theory 2

The course provides a detailed study of advanced theory of food preparations which are based on the art of French Cuisines.

Food Theory 3

Food Theory 3 provides a detailed study of international cuisine and buffet preparation.

Students will learn applications of advanced theory of cooking for menu planning, presentation and service of food, organization of the larder department, types and kinds of buffet, preparations of the hot and cold hors d'oeuvre, preparation of roasted meat for buffet centerpieces, galantine, fish, shellfish and mollusks and preparation of cold sauces, egg dishes, preparation of international salads and international vegetable dishes.

The emphasis will be on cost control, quality and standards of prepared

foods, and also upon group work, methods, production discipline, safety, food sanitation, personal hygiene, nutritional needs, and culinary perfections.

Food Theory 4

Students will research the necessary disciplines of all the ranks of the kitchen with emphasis on classical cooking, international cooking, french culinary terminology and production planning for each.

The emphasis will be on cost control, quality and standards of prepared foods, and also upon group work, methods, safety, food sanitation, personal hygiene, nutritional needs, and culinary perfections.

Food, Beverage and Labour Cost Control

This course is an evaluation of the steps in controlling a food and beverage operation, monthly operating statements, labour cost analysis and labour serving techniques.

Hospitality Computer Applications

This course is designed to introduce the new computer technology for the Hospitality Industry, including actual practice on mini-computers and the Remanco System specially designed for the management control of restaurant and bar operations. Emphasis will be on management systems controlling the Hotel front office, food inventories, menu planning, cost control and payroll.

Hospitality Law

The student will learn the law and legislation pertaining to the Canadian hospitality industry, the insurance, liabilities, right of lieu and Innkeepers Compensations; also how the law protects the customers.

Hospitality Marketing

This course includes a study of hotels, motels, and resort marketing; market analysis; marketing plans, package travel; public relations; direct mail advertising; internal promotion; group and convention sales. Also covered is the job of the sales representative, how to make a sales call, and convention service functions.

Hotel Butchery

This course provides a detailed study of the theory techniques, and the methods of HOTEL STYLE BUTCHERY of veal, lamb, beef, pork, poultry, game and fish.

The student will learn boning, portioning, stuffing, larding and barding and preparation of various cuts of meat for cooking.

Emphasis on practical work with butchery tools, production safety and personal hygiene.

Hotel Front Office and Housekeeping Operation

This course deals with such front office operations as: daily routine; night audit; reservation systems; cashiering; telephone department; uniformed service; guest credit; psychology of selling, and the maximum use of hotel rooms while giving cheerful service.

International Gastronomy

This course provides a detailed research and study into practices of the hotel style food preparation of International and French cuisine, and complete operation of a restaurant.

Emphasis is on international table d'hote menu planning, preparation of food and wine requisitions and their costing, preparation of the cost control summary sheet for labour, food and supplies, establishing food portions and cost per portion, planning of the kitchen organizational chart for food production and pot-washing department. Also discussed will be writing job descriptions, planning of dishing-out of food for the dining room according to a planned menu, research of recipes and participation in the actual operation of a licensed restaurant.

International Gastronomy

This course provides a detailed research and study into practices of the hotel food preparation of International and French cuisine, professional services for dining room and bar, computerized control of the restaurant operations and actual participation in the operation of the licensed restaurant.

Kitchen Management 1

Students will learn the scope and dimension of the Canadian hospitality industry through the study of the history of early Canadian Inns and eating establishments, sanitation/hygiene/nutrition/safety and practical mathematics as related to the food industry.

Kitchen Management 2

The course provides introductory study in kitchen management. The student will learn specifics pertaining to labour costs, purchasing, cost control, the structure and organization of the kitchen, as well as scheduling, production norms, product purchasing, perishable and staple products, product specifications and products knowledge, costing recipes, and menu portion control , cost of prepared products and costs of foods.

Kitchen Management 3

The subject menu planning has been designed to teach the student basic principles of menu design and menu planning. Emphasis will be on the influence of menu content, methods and techniques of menu writing, menu terminology and menu copy. Students will learn different types and kinds of menus, daily menus, special occasions menus, and also banquet menus. Students will also learn that the menu is the operational blueprint for the foodservice operations.

Kitchen Management 4

The professional chef must have a knowledge of accounting in order to run a profitable operation. This is even more so in a smaller operation where the chef may also do all of the administrative work.

The course provides a detailed study of the basic fundamentals of accounting. Included in the course will be bookkeeping, journals, budget and forecasting. Emphasis will be on basic bookkeeping, control procedures, value of inventories and cost of sales.

Language d'Hospitalite

This course will provide students with the basic or advanced knowledge of food, wine and spirits terminology and conversations pertaining to dining room and bar services. There are four different levels of languag

Large Quantity Food 1

Students will learn the culinary basics; preparation of soups; derivatives of basic sauces; breakfast dishes; international dishes from pasta, rice and corn cereals and preparation of garnishes for quantity food preparations.

Course Descriptions

Large Quantity Food 2

This course provides a detailed study in advanced professional cooking. The student will learn the methods of preparation for fish and meat dishes, liver pate, cheese pie, croquettes and dumplings, omelette cookery, shellfish, mollusks and poultry dishes, also production discipline, safety, food sanitation and personal hygiene.

Management Techniques For the Hospitality Industry

This course provides the student with a basic understanding of management decision-making; styles of leadership; motivational and communications techniques used by effective managers.

Menu Planning

This course provides a detailed study of the history of menu evolution, the modern concept of management by menu, plus the constraints in menu planning, finances, analysis and operational control. The student will learn menu mechanics and merchandising for food and liquor; methods of integrating the menu into the operational systems of purchasing, production and services, the dependence of investment ventures on the menu; and also the recognition of the customer in the acceptance and evaluation of the menu. The course will provide the student with a knowledge of management involvement in the detailed aspects of menu planning, writing and printing.

Mixology

To provide the student with the skills and theoretical knowledge required for professional mixing, garnishing and serving bar cocktails, liquors, liqueurs, beer, wine and non-alcoholic drinks.

The student will also learn the professional use of bar stemware, glasses, utensils and equipment necessary for setting up a bar; inventory; and how to change draft beer barrels.

Nutrition 2

This course continues the nutrient study with emphasis on contemporary issues and the application of nutritional knowledge in understanding these issues in relation to the food industry.

Personnel in The Hospitality Industry

The student will acquire the basic knowledge to deal with personnel in the hospitality industry: setting the management and employee goal, recruiting, interviewing, selecting and hiring, to implement and evaluate results. Overall concept of management and organizational effectiveness will be covered.

Practical Baking

The course provides detailed study and practical hands on experience of the baker/patissier trade as practiced in hotel setting.

Students learn about bakeshop organization, sanitation, hygiene and safety in bakeshop organizations, bakery ingredients and the technology of baking.

Purchasing For Hospitality Industry

This course provides a detailed study of principles and practices of purchasing food and supplies in quantity. Students study the following concepts: management responsibilities for purchasing control; organization of purchasing functions; buying strategies; methods and techniques of buying food; operating supplies, and capital items; service and vendors relations; value analysis in purchasing; centralized and departmental purchasing; quality control; and new concepts of materials management.

Quantity Food Management 1

This course provides a detailed study of the management responsibilities in planning, organization, costing, conducting, and controlling food production. Students will learn work methods, cleaning, and sanitation used in food production. Also included in this course is the theory and practice of professional basic cooking.

Quantity Food Management 2

Students will learn the grading of meats; standards and quality of the prime cuts of meats; aging and storage of meat; hotel butchery for meat, poultry and fish. Also included in this course are: advanced methods of cooking meat, poultry, fish and shellfish; pantry production; breakfast cookery; quality vegetable preparation; preparation of manufactured and convenience foods.

Security for the Hospitality Industry

Crimes of violence have invaded the Hospitality industry, together with sophisticated rip offs, fires, hold ups, credit card frauds. This course provides a detailed study of security functions for hotels motels, clubs, resorts, restaurants and food service operations. The student will learn methods of modern security for the protection of guests, property and employees.

Small Quantity Food 1

Students learn the basic principles of food production, the culinary terminology, learn the safe use of kitchen equipment and of professional tools and the methods of handling raw and prepared foods.

Small Quantity Food 2

The course provides an advanced cooking practice for quality food production. Students learn preparation of popular soups and variations of sauces; hors d'oeuvres; fish dishes; meats; poultry and variations of salads, salad dressings, and potato dishes.

Technology

A.C. Equipment 1

Students will learn the theory and operation of transformers: single and three-phase transformers, transformer banks, special connections, auto-transformers, potential and current transformers. Losses, efficiencies, regulation, rating, construction, accessories, performance, construction and principle of operation of polyphase induction motors will also be discussed.

A.C. Equipment 2

Students will learn control of A.C. motors: starting, braking, reversing, plugging, speed and torque adjustment, motor controllers, motor protection, code applications, control circuits and control accessories. The single-phase motor, performance and applications, alternators, alternator characteristics, rating and parallel operation will also be discussed.

Advanced Strength of Materials

This is an extension and advanced treatment of the Basic Strength of Materials course, but with greater focus on the design of simple structural components under axial load and combined bending, stress effects and deformations. It also introduces the student to statically indeterminate systems in preparation for the 5th and 6th semester structural programs.

Advanced Survey 1

Using the practical and theoretical knowledge acquired in Surveying 1 and 2, the student shall work on projects that require advanced survey techniques. The student will be able to do the surveys for layout of road widening, residential subdivision layout, perform the standard adjustment of survey instruments and use the godetic control to lay out complex survey projects.

Advanced Survey 2

The student will work on practical projects such as determination of a clearance of a hydro line, coordinates of an inaccessible station, determination of an unknown radius of existing highway or railway, interlining on long lines and barometric elevations.

Air Photo Interpretation

The student will be able to acquire and use airphotos to perform general airphoto interpretation for terrain evaluations. Students will identify all unconsolidated and consolidated landforms and relate their pattern elements to the corresponding ground conditions as they affect route and site selection.

Air Transportation and Airport Planning

The student will be able to help in the formulation of a new air transportation plan for an air hub and help in the design of a new airport system, including the runway design, terminal design, and ground transportation system.

Algorithms and Data Structures 1 and 2

These courses cover the algorithms related to the management of data including sorting, hashing, and recursive algorithms, and memory management algorithms. The fundamental data structures studied include pointers, linear lists, tree structures and graphs. Pascal will be used to describe the algorithms and data structures.

Analysis Instruments

The purpose of this course is to provide the instrumentation technician student with working knowledge of operation, calibration and maintenance of analyses instruments used in industrial processes.

Analytical Chemistry Applications

The student will expand his practical analytical skills through the analysis of industrial samples which require more elaborate methods of sample preparation and more complex back titration, indirect analysis, determination of functional groups in organic samples, wet combustion, distillation of volatile acids and bases followed by subsequent titration are a selection of the analysis which the student is expected to perform. The emphasis is placed upon correct laboratory techniques, recording and interpreting data, researching and adopting experimental procedures for various industrial samples.

Analytical Chemistry 1 Laboratory

The student will learn the basic routine laboratory techniques of chemical analysis: analysis of samples (ores, cement, food stuffs, etc.) by titrimetric and gravimetric analysis. Students will record and interpret experimental data, calculate results based on the data, research standard procedures and adopt the method best suited for a specified purpose. Safe laboratory practices and techniques are promoted.

Analytical Chemistry 1 Lecture

The student will acquire the basic principles of "wet" analytical chemistry and calculate solution strength, percent composition, solubilities, ionization constants, and factor relationships based on neutralization reactions, titrimetric precipitations, complexometric titrations, oxidation and reduction reactions and gravimetric analysis.

Applied Explosives (Chemistry)

To study some physical properties of minerals, prepare some mixtures and analyse them and study chemical methods of analysis.

Architectural Design Drafting 1

The student will be introduced to design and working drawing techniques, codes and regulation requirements, and energy efficiency, through the preparation of design and working drawings and details for a series of small projects. Emphasis will be on residential wood frame and brick veneer construction.

Architectural Design Drafting 2

The student will further the knowledge gained during the first semester by improving drafting, detailing and designing skills, through the design of a small factory. The work will consist of a complete set of presentation and working drawings for a two-story office section and a single-story plant area, using a steel structure with masonry infill and aluminum windows.

Architectural Design Drafting 3

Students will broaden their knowledge in architectural design and construction and improve their skills in architectural drafting by studying a three-story masonry, heavy timber, and precast concrete structure. The student will design and prepare presentation land work drawings for either a residential home for elderly people or a motel, in compliance with the Ontario Building Code.

Architectural Design Drafting 4

The students will broaden their knowledge and skills in architectural design, drafting and detailing by using a multi-story, poured and precast concrete structure as the basis for study and design. The work will involve the preparation of presentation and working drawings for a five-story office complex with two levels of underground parking. The drawings will be prepared in metric units and in compliance with the Ontario Building Code.

Architectural Detailing 1

With emphasis on developing good drafting skills and drawing conventions, the student will, through the preparation of large-scale details of components and assemblies, gain knowledge about construction

techniques and materials pertaining to residential woodframe and masonry construction.

Architectural Detailing 2

Students will further their knowledge from semester 1 by studying the complex parts of commercial industrial buildings and those which require accentuated linework.

Architectural Graphics

Introduction to graphic presentation as an aid to develop good drafting skills. Course will include, linework, lettering graphic conventions, layouts, multiviews, paraline and axonometric projections, one point and two point perspectives, using freehand and handline approaches.

Assembler Programming

The student will use a relocating macro-assembler, linking loader, and simulator/debugger to assemble load, run, and debug programs written in assembler for a typical 16-bit microcomputer—the 68000.

Astronomy

The student will be able to apply astronomy for the determination of azimuth. He will perform observations on the sun and other stars.

Automatic Controls 1

This course provides the student with a sound working knowledge of the basic elements of process control. Students will be introduced to the basic process characteristics, open and closed loops, modes of control used in industrial automatic controllers, maintenance and operation of pneumatic controllers, basic process dynamics and controller tuning fundamentals.

Automatic Controls 2

This course introduces students to more advanced process control systems. It combines knowledge and skills gained in electricity, electronics and instrumentation with further studies of signal conditioning, control loop characteristics; designing, tuning and troubleshooting sophisticated control systems; applications of advanced control concepts to boiler controls. Also the configuration and operation of distributed control systems such as the Honeywell TDC 2000 will be considered.

Automation Systems

Improving productivity is a fundamental goal of technology. Automation is the application of automatic control systems to manufacturing processes in order to achieve a high level of productivity.

BASIC Programming (Electronics)

The student will be able to operate a microcomputer system including a disc drive and a printer. He/she will be able to solve scientific and technical problems using the language BASIC.

Basic Strength of Materials

Stress and deflection analysis is essential in order to design practical and safe components that are functional. This is an introductory course in the theory of elasticity. The student will calculate stress and strain for metal components and other building materials. This course is designed for third semester technology students who have successfully completed the statics and mechanics courses in addition to Math 1 and 2.

Basic Tool and Fixture Design

This course enables students to understand what tool design is and what role it plays in industry. The course will cover procedures of blueprint reading for tool design purposes, tool drafting vs. other drafting techniques as well as selection rules for dimensioning and tolerancing. The student will draft and design for most of the time by working on such projects as: single point and form cutting tools, gage design, clamping and holding fixtures for numerical control equipment and drill jigs. Knowledge of mechanical drafting is essential.

Bioscience

This course covers the basic and common elements of living things with emphasis on the characteristics of mammalian biology, particularly human biology and physiology.

Boatbuilding and Repair 1

This is primarily a "hands-on" course. This course introduces students to the basic methods, techniques, materials and tools of boatbuilding and repair. Students will be required to be involved in the construction of small craft using metal, fibreglass and wood as the structural materials.

Boatbuilding and Repair 2

Building on skills and knowledge acquired in Boatbuilding 1, students will participate in the construction of small craft involving advanced techniques in metal, fibreglass, reinforced plastic and wood construction.

Building Codes and Regulations

Having studied the Ontario Building Code (with specific emphasis on Parts 3 & 9), the National Fire Code of Canada, the student will be able to find and interpret the Bylaw sections with respect to various building types and construction.

Building Environ Systems 1

This is an introductory course in heating, ventilating and air conditioning. The student will study the fundamental principles of air conditioning, the scope and uses of air conditioning, physical principles, heat load calculations, cooling load calculations, residential cooling loads, psychrometrics, the air conditioning process, fans, air distribution and devices.

CAD 1 (Computer Aided Design)

CAD 1 will introduce students to Computer Aided Design CAD, its capabilities and limitations. Each student will learn to operate the Auto-Trol graphic terminal, draw 2-dimensional parts, dimension drawings using conventional and non-conventional tolerances, create cross sections using cross-hatching, design 3-dimensional parts using the projected entity method, display, modify, edit, rotate and translate 3-dimensional objects and plot 2 and 3-dimensional parts.

CAD 2 (Computer Aided Design)

CAD 2 is a continuation of CAD 1. It will expand the students' understanding of surfaces, file structures, application interfacing, data verifications, translation, translation-rotation of groups, sets and array. Writing and creation of GRAPHL and/or EAGLE programming languages will be discussed extensively. The student will learn to design family of parts, nesting, flat pattern and bill of materials. Fundamentals of solid moduling and NC machining will also be discussed.

Calculus 1 (Chemical)

Pre-calculus topics include linear functions, quadratic functions and semi-log and log-log graphs.

The introductory calculus includes both differential and integral calculus-average rates of change, instantaneous rates of change, rules for finding derivatives, critical points on curves, maximum/minimum problems, differentials and small changes, related rate problems, exponential functions, anti-differentiation, areas under curves, definite integrals and their applications.

Calculus 1 (Civil, Survey, Hydrographic, RAC, Solar, Energy Mgmt.)

An introductory calculus course covering differentiation and integration of algebraic functions. Topics include instantaneous rates of change; maximum and minimum problems; differentials and small changes; product, quotient, composite function rules and implicit differentiation; related rate problems; indefinite and definite integration; areas under curves, volumes of revolution and moments of inertia.

Calculus 1 (Electronics)

Calculus 1 consists of the following sections: graphical methods of differentiation, algebraic methods of differentiation; power, chain, product, and quotient rules, derivatives of sin u, cos u, eu, and ln u, maximum and minimum problems, the integral, integrals of sin u, cos u, eu, and ln u, and the substitution method of integration.

Calculus 1 (Manufacturing, Electro-Mech., Ind. Mgmt., Safety)

An introductory calculus course to include the following topics: average rates of change; instantaneous rates of change; maximum and minimum problems; differentials and small changes: product, quotient and composite function rules and implicit differentiation; related rate problems; indefinite and definite integration; areas under curves and applications of integration.

Calculus 2 (Civil, Survey, Hydrographic, Solar, Energy Management)

The student will be able to demonstrate basic mathematical skills, and use them appropriately in specific application, in the differentiation of trigonometric, exponential and logarithmic functions, and certain integration techniques to include substitution, basic log and exponential forms, basic trig forms, integration by parts, and integration using tables.

Calculus 2 (Electronics)

Students will learn additional calculus; calculus solution of first order differential equtations; Laplace Transform solution of first order differential equations; circuit analysis using Laplace Transforms; Bode and Polar plots; and FORTRAN programming.

CAM 1 (Computer Aided Manufacturing)

CAM 1 will introduce the student to the concept of computer integrated numerical control. He/she will learn to prepare tool paths for turning, 2-3-4 and 5-axis milling-drilling-boring and contouring applications. Students will produce, using APT, and compact 2 source generators, source files of the above. Edit these files for further processing, and finally, will post process these files into suitable tape files for turning or milling type applications.

Chemistry of Explosives 1

The student will be able to determine empirical and true molecular formulae, balance equations and perform chemical arithmetic, explain the atomic theory of matter, calculate heat of reaction, define and apply the gas laws, and explain how the activity series evolved. Students will also learn how to treat water for hardness removal, remove noxious agents from air and water, make-up solutions of known molarity, molality and normality and determine their pH values.

Chemistry 1

The course begins with the review of basic principles of chemistry which comprise matter, atomic structure, periodic table, balancing of reactions, preparation of solutions and titrations involving acids and bases. It is then followed by an indepth study of operations and manufacturing procedures of selected chemicals, petroleum and steel industries. In these studies flow charts and diagrams are used widely with emphasis on the chemical conversion reactions, the equipment and instrumentation for proper control of the system.

Chemistry 2

This course is a continuation of Process Chemistry 1. The following industries are studied in depth: petroleum processing and refining; the manufacture of industrial gases; water treatment and purification; pulp and paper; iron and steel operations; soap and synthetic detergents; glass industries.

Circuits and Measurements

This course provides the student with a sound understanding of the effect of resistance, inductance and capacitance in series and/or parallel DC and AC circuits. Measurement techniques related to these circuits are also covered.

Civil Drawing

Having acquired the necessary drafting skills from the two previous drawing courses, the student will be able to draw full working layouts from engineer's line diagrams and prepare reinforcing steel shop details and bar lists.

Commercial Systems 1

The course encompasses central systems and all-air systems including single-zone variable air volume, dual-duct, and multizone. The student will be able to analyze commercial systems, design layouts, specify components and troubleshoot.

The systems covered are the unitary and build-up types used in most typical residential, commercial and industrial installations and, to some extent, alternate energy installation.

Commercial Systems 2

The course is based upon a series of theses presentations which have been researched by and assembled by students. There is one test given on each presentation in the class immediately following the presentation.

Course Descriptions

Computer Architecture 1

Students will study the fundamental of microprocessor hardware and software. They will write machine language programs for a 68000 based system.

Computer Architecture 2

A course describing the extra circuitry added to a processor board to make a complete system. Topics will include discussions of Direct Memory Access, system timing, memory management, serial and parallel I/O.

Computer Control

This course will teach you how to program and apply microprocessor based equipment for process control such as the Radio Shack TRS 80, Apple II, and Honeywell TDC 2000.

Computer Programming (Mechanical Programs)

Algorithmic solutions to computer problems will be developed, flow-charting will be illustrated, and computer instructions will be coded in the FORTRAN and BASIC languages.

Computer Programming and Concepts

Through proper application of the skills developed in this course the student will be able to use a computer with BASIC language capabilities to solve technical and non-technical problems. The student should be able to utilize these skills in solving course related problems to be encountered during the remainder of his/her program.

Computer Programming 1 (Basic) (Arch., Civil, Expl., Survey, Hyd. Survey, RAC, Solar)

Alogrithmic solution to computer problems will be developed with the aid of flow-charting. Instructions will be coded in the language, BASIC.

Computers in Business

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A survey course on how computers are used in business. This course serves as contrast to the technical applications of computers.

Construction and Building Materials 1

The student will be able to describe the manufacture, performance, quality and application of materials used in building construction, as well as perform control tests on certain of these materials, i.e. concrete, masonry, steel.

Construction Management and Estimating

This overview of the construction management process will allow the student to identify the interrelation and function of the principles involved. As a management function, the student will organize and carry out an estimate. This includes the organization of procedures, the preparation of quantity lists of materials and the cost estimating of sizable, but uncomplicated projects.

Construction Technical Drawing

This is an introductory course in technical drafting in which the student will acquire the basic drawing skills in linework, lettering, labelling, layout and organization, axonometric and orthographic projection, and cross-sections. On completion of this course, the student will be able to learn the more complete structural and civil layout drawings and details as taught in the follow-up course, Structural Drafting.

Control and Electronic Survey 1

The student shall be able to operate efficiently EDM instruments, design and execute simple horizontal and vertical control network, apply the atmospheric corrections to observed distances and do the reductions using charts and monograms. He/she will be able to observe reciprocal zenith distances for vertical control projects.

Control and Electronic Survey 2

The student will be able to calculate plain rectangular coordinates of control stations from data collected in the fall semester. Students will also be able to calculate elevations from reciprocal zenith distances, use the method of intersection and resection for position determination and calculate the ambient refractive index for EDM distances.

Control Systems (Electrical Control Engineering Technician)

An introductory course in feedback controls as applied to all electrical and electromechanical systems. Aims of feedback, block diagrams and hardwares are described. Students are led to relate response to inputs. Treatment is physical and qualitative instead of mathematical. Approximately equal times are allotted to steady-state and transient response. Characteristics of energy-storage and energy-dissipative elements are compared and the controlled outcome stressed. Stabilizing techniques are introduced.

D.C. Equipment

The theory of operation, characteristics and applications of D.C. motors and generators. Control system components are studied to develop a feel for their operation and applications, wired into basic control circuits and finally into more complex circuits where the necessary components are selected and values calculated.

Data Communications Systems 1

This course covers low speed asynchronous data communications over the telephone network.

Demand Actuated Travel

With emphasis placed on the transportation planning process as a total process requiring the integration of many of the interacting characteristics of the urban environment, the student will establish definite relationships between person or vehicle travel and land use. The student will be able to forecast, within acceptable margins of accuracy, future trip generation and demand for travel by all modes in existing or future developments and their assignments on existing and proposed network systems.

Design Loads 1

The course involves the calculation of heat loss and heat gains for residential buildings, including the design and drawing of the appropriate forced air distribution systems. To accomplish this, the student will study the principles of heat transfer, methods of moving air, duct layout and equipment selection. The methods used will comply with the regulations of the

latest issue of the Ontario Building Code, i.e. HRA Institute of Canada Digest.

Design Loads 2

The student will learn the requirements and procedures for calculation, design, selection of equipment and installation of air conditioning and heating requirements to meet design criteria as calculated by heat gain and heat loss procedures for commercial buildings.

Design Loads 3

The student will learn to layout and draw a built-up heating and/or cooling system for commercial and/or industrial applications, to determine duct and/or hydronic pipe sizes as well as size equipment relative to heat loss and/or heat gain calculations according to the A.S.H.R.A.E. handbooks.

Die Design 1

This course will identify and explain the fundamental requirements which must be known and understood for a large number of cold press-work operations and to provide the student with the theoretical methods in calculating and analysing components of sheet metal produced by cutting and forming. The student will be involved in practical design activity for most of the time; die details, function nomenclature as well as die and drafting techniques will form the core object of the course. Projects will consist of: two-stage-piercing blanking die, compound die and bending die.

Die Design 2

Using the principles laid out in Die Design 1, the student will solidify and expand on his design techniques by performing practical die design assignments. The student will be involved in drafting and design activity for most of the time by working on projects such as: adjustable die design for short run production, drawing dies, curling dies, and stamping die estimating methods, etc. Mechanical Drafting is deemed essential.

Digital Circuits

This course introduces the basic concepts of solid state control systems as found in today's industry. The operation and application of the basic logic gates are developed and then used in flip flops, counters, shift registers and other typical industrial control systems. Binary counting and boolian algebra are also included to further develop an understanding and analysis of the circuits.

Throughout the course the student is taught to convert the logic circuits to conventional relay circuits, and how to utilize the Boolean algebra with relays circuits as seen in programmable control systems.

Electrical Circuits and Applications (Small Craft & Marina Technology)

This course will cover the basic concepts of electrical theory, circuits and wiring applications of small craft and marinas with relation to trade practice and governed by the Canadian Safety Standards for Electrical Installations in small craft and marinas.

Electrical Circuits and Applications 1 (Electrical Control Technician)

A fundamental course covering the behaviour of electrical devices, circuits, their applications and industrial practices. Areas include: characteristics of common DC and AC sources, resistance, power and energy, meaning of equipment rating, magnetism and electromagnetism, inductance, capacitance, simple and complex circuits connected to DC and single-phase supplies, major electrical laws, use of basic instruments and the oscilloscope and trouble shooting.

Electrical Circuits and Applications 2 (Electrical Control Technician)

This course will cover the alternating current theory: the sine wave and its properties, vector representation, polar and rectangular coordinates, non-sinusoidal waves and harmonics. Also included will be the study of measurement of a.c. quantities and the oscilloscope, inductive and capacitive reactances, impedance, complex a.c. circuits, circuit response as a function of frequency, non-sinusoidal waves and wave filters.

Electrical Circuits and Applications 3

This course covers three-phase systems of voltages, common supply voltage levels and connections, system rounding, balanced, unbalanced and parallel loads, phase and line voltage and current relationship. Power in three-phase circuits and their metering, use of instrument transformers will also be discussed.

Electrical Controls 1

The first course in electrical theory introduces mechanically oriented students to electrical circuit theory. Use of basic electrical instruments to make voltage, current and resistance measurements is stressed. DC circuit work is dealt with in detail with an introduction to alternating current circuitry.

Electrical Design 1

This course covers electrical design procedures, drafting room practices, drawing fundamentals, physical layouts, illumination design, wiring methods, construction methods and materials, and the necessary code requirements. Design projects are assigned and carried out under the guidance of an instructor with specific emphasis on skill and quality.

Electrical Design 2

This course is a continuation of Electrical Design 1. It includes further development of the information learned in Design 1, relevant to the programmable controller. The course covers operational flow diagrams, bills of material, protection systems, introduction to programmable controllers descreate I/O, analog I/O, and program loaders of various types.

The student will also be required to design all pertinent information for a small and a large project based on the use of the programmable control system.

Electrical Drafting

The student will learn to solve electrical design problems and apply practices as related to the construction and building industry, using specific electrical terminology, as well as electrical codes and design layouts.

Main course topics include electrical lighting, electrical heating, and

application of low voltage electrical motors, electrical control and associated distribution equipment.

Electricity 1

This course introduces the student to DC and AC electrical theory. Electrical services used in industrial and domestic applications will be discussed. The student will become familiar with the theory of electric currents and simple circuits and will be able to solve related problems.

Electricity 2

This course continues the basic study of electricity commenced in Electricity 1. It is assumed that students enrolled in this course are thoroughly familiar with the work covered in Electricity 1. The course covers AC and DC circuits, including three phase systems. Various types of DC and AC motors are studied together with their starting systems and protective devices. The generation of electrical power, both DC and AC is covered.

The instrumentation portion includes a review of instrument transformers and their use, and includes the use of instrument loops, control systems, and the basic measuring devices used in mechanical, electrical and pneumatic control systems.

Electromechanical Techniques

This course provides an understanding of behaviour, operation, application, and some theory of electromechanical devices employed in electronic equipment. Also, properties of common material used, corrosion, cathodic protection, and fastening methods in the electronic field are discussed.

Electronic Applications

Electronic applications will introduce the students to various types of electronic instruments in common use in industry. The students will perform laboratory assignments on these instruments. Lectures will be given on certain topics that cannot be thoroughly covered in a laboratory assignment (eg. D.P. cells). Emphasis will be on the practical use of electronic instruments. Upon completion of this course, the student will be able to operate and calibrate the instruments in the laboratory assignments, understand their principles of operation, and know their application in industry.

Electronic Circuits and Applications 1

An introductory section on the basic concepts of electricity and current flow leads to an analysis of DC series, parallel, and series- parallel resistive circuits. The characteristics of capacitors and diodes are investigated, and the results applied to AC-DC rectifier circuits and clipping and clamping circuits. The theory of operation of the VOM and oscilloscope are studied and these instruments are used in the laboratory.

Electronic Circuits and Applications 2

An investigation of semiconductor action leads into the theory of operation of the bipolar transistor. Transistor bias requirements and suitable bias circuits are analysed, the the characteristics of large and small signal amplifiers are then examined in detail. The effects of feedback are investigated and the results applied to explain the operation of feedback oscillator circuits.

Electronic Circuits and Applications 3

In this course the emphasis is on operational amplifiers. The OP AMP is introduced with its basic theory, its limitations and practical applications. The field effect transistor is discussed and the discrete differential amplifier is used to lead into the OP AMP.

Electronic Circuits and Applications 4

This course covers topics in pulse circuits and the thyristor family. Applications in industrial circuits are discussed.

Electronic Circuits and Applications 5

A practical design course that examines amplifier, oscillator and filter circuits used as building blocks for most transmitter and receiver circuits. The characteristics of transistors at high frequencies will be examined and designs will be made that achieve stable, low noise gains.

Electronic Measurements for Chemical Systems

The student will apply fundamentals of electronics to typical measuring instruments which are relevant in the chemical and biological field with appropriate problem solving and laboratory exercises.

Electronic Production Technology 1

This course is the first part of a two-semester subject. In this design part, students master the basic skills of Electronic Drafting and Printed Circuit Layout Techniques and become familiar with a cross-section of drafting conventions and practices. A suitable project (small amplifier, power supply, colour organ, or similar) and a complete set of drawings to good commercial standard must be produced. Each drawing assignment is a practical application of lecture theory, and a student gradually develops drafting skills and electronic design understanding.

Electronic Production Technology 2

This is the second "construction" part of a two semester subject in Electronic Production Technology. The student will gain experience in soldering and in complete printed circuit board production including layout, negative film and P.C. Board manufacturing. Manufacturing practices and processes will be taught. The student will construct an electronic project, combined power supply and function generator "unit" in the Electronic Production Lab. Each student will work individually on his project, using methods resembling the current assembly line techniques. The final product is to be built to good quality workmanship standards. A complete specification book must be presented with each unit after testing procedures are finished.

Electronics 1

This course starts with an introduction to the principles of solid state devices and proceeds through a study of power supplies, bipolar transistors, circuits, and circuit applications. This is followed by a study of field effect transistors and circuits, including a comparison between F.E.T.s and vacuum tubes operating in similar circuits. The course concludes with

a study of selected thyristor devices and circuit applications pertaining to industrial control.

Electronics 2

The course deals with basic logic concepts and includes an introduction to microprocessing. The topics explored include basic logic gates, flip-flops, clock circuits, counters, registers, storage devices, and input-output systems. The course concludes with an introduction to microprocessors and applications of microprocessors to industry.

Engineering Drawing

This is an introductory course in Engineering Drawing in which the student will acquire the basic drawing skills in linework, lettering, labelling, layout and organization, axonometric and orthographic projection, and cross sections for mechanical and construction projects. The latter part of the course will stress piping drawings exclusively.

Environmental Microbiology

The objective of the course is to give the students a knowledge, both practical and theoretical, of medical microbiology including parasitology, mycology, bacteriology and virology.

Equipment and Energy Selection

The student will be able to select types of air conditioning systems and equipment for residential, commercial and industrial use considering first cost, owning and operating costs and other economic factors.

Estimating (Explosives)

The student being familiar with the availability, strength rating and cost of authorized explosives will be able to recommend both type and quantity required in routing blasting operations.

Explosive Technology 1

The student will be able to describe the manufacture, properties and safe handling of conventional dynamites, slurry explosives and blasting agents. Students will also be able to select and assist in hooking up a variety of delay and non-delay initiation systems. Coupled with technical visits to both quarry and construction site, students will be able to load and shoot a simple round with supervision.

Explosives Technology 2

The student will be able to describe a wide range of blasting procedures currently employed in construction, quarrying and mining. In addition students will be able to outline the limitations and various types of hand held and crawler-mounted rock drills and be able to select both type and number of machines as required.

Explosives Technology 3

The student will be able to use seismic and sound level equipment used in monitoring blasting operations; also design blasting systems to contain vibration and noise within safe limits. Further, students will be able to estimate drilling, blasting and related costs as encountered in quarrying and construction.

Final Control Elements

This course provides the student with a sound working knowledge of control valves and their maintenance. Upon completion, students will be able to explain the function and operation of control valves and control valve accessories, size and select control valves for various applications, and specify correct installation and maintenance procedures.

Fire Protection

Effective programs must be developed to reduce the immense loss potential due to fire both in terms of human values and economic impact. Techniques for fire prevention and extinguishment are considered.

Fluid Mechanics (Mechanical)

This course provides the student with a basic understanding of fluid mechanics principles in general and their applications to fluid power technology in particular. It will enable the student to analyse the behaviour of fluids, determine their properties and calculate parameters of simple fluid systems.

Fluid Mechanics 1 (Civil)

Using the properties of fluids, fluid statics and the underlying framework of concepts, definitions, and basic equations, for fluid dynamics, the student will be able to solve problems associated with flow of water in pipes and open channels and their measurements (Weirs, Venturi, Orifice and Watermeters).

Fluid Power Circuits and Controls 1

This is a continuation of the Industrial Hydraulics course. It discusses typical industrial hydraulic circuits, analyses the relation and interaction between components and sub-systems. Topics include: load analysis, component matching and steady state characteristics.

Fluid Power Circuits and Controls 2

This course introduces moving part logic and the theories and equipment associated with this method of control. It will enable the students to design complex pneumatic control circuits using Boolean Algebra and other accepted methods. It will introduce hardware in the laboratory through projects.

Food Microbiology

The student will study the major microbiological and non-microbiological methods of preserving foods. Areas of study will include prevention of food spoilage; the use of moisture control, canning, irradiation, and chemicals in food preservation; and the causes and prevention of food-borne illness. Prerequisite: Introductory Microbiology.

Fortran Programming (Electronics)

Algorithmic solutions to computer problems will be developed, flowcharting will be illustrated and computer instructions will be coded in Fortran.

Fortran Programming (Industrial Engineering)

Algorithmic solutions to computer problems will be developed, flowcharting will be illustrated; and computer instructions will be coded in the FORTRAN language..

Fundamentals of Manufacturing Processes

The objective of this course is to introduce the fundamentals of various production processes used in secondary and primary industries. The processes related to the secondary industries will include: casting, machining, forming & shearing processes. The primary industry processes will be limited only to iron and steel making methods.

Course Descriptions

Gas and Diesel Motors For Yachts

This course examines the components, principles of operation, selection, basic maintenance and servicing of two and four stroke cycle gasoline and diesel yacht motors and their ancillary equipment.

General Chemistry 1

Review of fundamental principles of chemistry as a preparation for more advanced courses.

General Chemistry 2

To continue to learn fundamentals and principles of chemistry as a preparation for more advanced courses.

Heat Transfer 2

This course builds on knowledge gained in Heat Transfer 1. Some of the topics covered are: transient effects on conduction heat transfer, free and forced convection, analysis of heat transfer within heat exchangers, and heat transfer with phase change. A working knowledge of calculus is recommended. Computer programs in BASIC and FORTRAN will be used to demonstrate or solve examples given in the course.

High Frequency Circuits

Amplitude modulation and frequency modulation are analysed, along with circuits used in AM and FM communications systems.

Highway Technology

Students will be able to design and layout horizontal and/or vertical alignment of roads. Students will also be able to determine the geometric characteristics of the road on the basis of function, safety, and traffic volume carried by the road.

Hydrographic Survey 1

The purpose of this course is to acquaint students with the elements of hydrography to the extent that they will be capable of performing basic activities associated with actual field operations, including data collection and processing, associated mathematical computations for planning a hydrographic survey, establishing a suitable sounding datum, conduct sounding operations.

Hydronic and Steam Systems 1

This course is intended to familiarize the student with the use of steam and hot water as heat transfer media in domestic and industrial installations. The construction, installation and operation of system components will be covered, together with the basic rules covering such installations.

Industrial Electronics 1

An introduction to the operational characteristics and applications of electronic devices is developed through research, experimentation and mathematical analysis. These devices include diodes, transistors, silicon-controlled rectifiers, triacs and other components of industrial applications.

Industrial Electronics 2

The basic concepts developed in Industrial Electronics 1 are now taken and applied to typical idustrial circuits such as electronic timers, photo detectors, speed control devices and other industrial circuits. These circuits are then analysed to identify components, basic circuits and their effect in the overall operation. This helps to understand the total circuit operation, identification of, and correction for typical circuit problems.

Industrial Hydraulics

This course introduces hydraulic hardware and illustrates its use in hydraulic circuits with the aim of preparing the student to identify and install, specify and select, analyse and design hydraulic systems which are applicable to industry.

Industrial Instrumentation (Electrical Controls Technician)

Industrial Instrumentation is designed to familiarize the student with pneumatic and electronic instrumentation. This semester covers instruments, meters, sensors, transmitters, transducers, receivers, indicators, recorders and computational devices. Pneumatic and electronic instruments are studied. Upon completion of this course, the student will be able to explain the operation of pneumatic and electronic instruments used in process control and will be able to install, calibrate and troubleshoot these instruments.

Industrial Organization and Management (Air Conditioning & Refrigeration/Mechanical Solar)

This course will enable the student to develop, and subsequently demonstrate, an understanding of modern management theory and practices. To this end the case study method will be used extensively throughout this course.

Industrial Organization and Management (Industrial Management Technology)

The structure of an industrial organization, the function of a management plan, direction and control of operations will be examined. The environment discussed will be Canadian which includes the various degrees of impact from the rest of the world.

Industrial Pneumatics

This course introduces the student to the use of compressed air as a power and control medium. Students will be able to select, install and maintain industrially used pneumatic hardware and design simple sequencing and control circuits. Course topics include gas laws, compression of air, selection of hardware and basic circuit design. A major portion of the course is laboratory work where the student builds simple and complex simulated control circuits.

Industrial Security

The graduate will be able to design a program of security for industrial plants and building complexes relating all security functions of guards, fire protection, emergency and disaster plans, physical and personnel security and security of documents. Students will learn to plan for physical barriers, electronic surveillance, the overall security system, security lighting and storage of valuables.

Instrumentation 1 (Solar)

This course is an introduction to the various types of instruments used in climate control systems as well as in general industrial installations. The course materials assume that the student has successfully completed Electricity 1 and 2 as well as Solid State Instrumentation courses.

Instrumentation 2 (Solar)

This course continues Instrumentation 1, and explores the systems used with the data acquisition devices previously studied. Environmental Systems and General Industrial instrumentation for continuously operating production facilities will be discussed. The course

materials assume that the student has successfully completed Instrumentation 1 and its prerequisites.

Introduction to Computing

Algorithmic solution to computer problems will be developed with the aid of flowcharting. Instructions will be coded in the language, BASIC.

Introduction to Pascal

Introduction to Pascal language to include its basic concepts, structure, elements and computer programming in VAX-2 Pascal language.

Students will be familiar to some DCL (Digital Command Language) needed to create, file, edit, link, compile, and execute a Pascal program.

No prerequisite is required but some prior exposure to computer programming is helpful.

Introductory Microbiology

The student will learn the basic concepts and techniques: how to use the light microscope, prepare and stain smears, make growth media, apply the techniques of pure culture and enumerate micro-organisms.

Kinematics of Machines

Mechanics of Machines is an engineering science which investigates the relationship between moving machine parts. It is the study and analysis of the functional motions of mechanisms combined with force, torque, and power ratios. During the course you will be acquainted with a variety of engineering and scientific calculations, and engineering drawing. During the lab sessions you will be exposed to a variety of visual, tactile and judgment-making experiences which contribute to the elusive quality described as "technical intuition".

Lab Instrumentation

The student will learn the general principles of modern physical techniques used in analytical work in chromatography, spectroscopy and electrochemistry.

Lab Instrumentation Application

The student will be able to properly use various instruments and carry out analytical work in chromatography (paper, gas-liquid, thin layer, electrophoresis), spectroscopy (IR, visible, UV, AH, flame photometry and nephelometry), and electrometric methods (potentiometric, voltammetric, and electrolytic). The student will be able to select the proper instrument and record and interpret data for various organic and inorganic industrial analyses.

Land Division

The students will be able to describe the evolution of the survey profession in the province of Ontario and the related statutes, namely The Surveyors Act and The Surveys Act. Students will also learn the procedures for dividing land in the province of Ontario and will be able to design a simple subdivision plan.

Lighting Systems 1

Through a combination of practical projects and theoretical lectures, this course will stress the interaction of lighting with other energy systems.

Lighting Systems 2

This course is a direct continuation of Lighting Systems 1 and will allow the student to attain a more advanced theoretical understanding of lighting design for commercial and industrial building complexes. A practical project in lighting will be integrated into the course work.

Logic 1

The goal of this course is to provide the student with the foundations of logic that computers and other digital systems are based upon. The student will learn the elements of digital hardware (such as gates, flip-flops, registers, counters, display devices), machine arithmetic, and appropriate applications of Boolean algebra.

Logic 2

Based on the principles and integrated circuit device operations developed in Logic 1, this course carries on with the study of more complex logic systems found in such areas as digital computers, digital communications, and digital control systems. The student will learn the operations and typical uses of arithmetic circuits, coded number systems, digital multiplexing, synchronous circuit design, error detection and correction, D/A and A/D conversion, semiconductor memories, and the properties of various logic families.

Machining Processes

A basic understanding of and experience in the operation of machine tools. Also an appreciation for and the ability to distinguish between the various metal removal methods, on lathes, milling and drilling, and grinding machines. The course project will be used as a means to an end, to maximize the amount of learning.

Manufacturing Cost Estimating

In order to prepare for estimating the expenses that are incurred in manufacturing products, the student will use the prerequisites of blueprint reading and manufacturing processes, to develop the techniques of cost estimating products manufactured by various processes such as machining, casting, welding, stamping or processes related to the plastic industries.

The student will learn to calculate labour and material cost for different types of estimates, will become familiar with the terminology related to estimating such as direct and indirect costs, burden rates, ship efficiencies, administrative expenses, profit margins etc.

Manufacturing Process Planning 1

The manufacturing engineer uses process planning to determine the order or sequence of operations necessary to manufacture a part. This course will be involved with some of the basic concepts of process planning used in the hardware industry. Preliminary part analysis, dimensional analysis, tolerance analysis, tolerance charts and the theory and practice of locating workpieces will be discussed. Using routing and operation sheets, the student will be involved in processing relatively simple parts to be manufactured by machining methods.

Manufacturing Process Planning 2

Using as prerequisites the fundamentals of process planning as laid out in the Manufacturing Process Planning 1, a series of process planning projects will be carried out. The student will be involved in processing parts of a more complex nature to be manufactured by machining, sheet metal fabrication and welding.

Manufacturing Processes 1

In this course students will learn the basic fundamentals of various manufacturing processes used in primary and secondary industries. The primary industry processes related to secondary industries will be discussed: casting; forming and shearing (hot and cold); machine (conventional and non-conventional); plastic assembly; and heat treatment to evaluate the merits of one method with another.

Manufacturing Processes 2

This course will be concerned with the fundamentals of processes and materials used in plastic and rubber industries. Other manufacturing methods, related to the metal industries, such as various thread and gear manufacturing will be discussed. The principles of process planning will be explained with emphasis on preparing routing and operation sheets for a given component to be manufactured.

Marina/Yacht Club Design, Construction & Operations 1

The emphasis of this course is a comprehensive study of the design and construction of marina and yacht club facilities under varied circumstances as well as the know-how of upgrading and modernizing of existing facilities. Included in this course are the fundamentals of site evaluation, feasibility and on-going operation of selected typical facilities. Although design theory will be covered, the emphasis will be on logical analysis rather than engineering.

Marina/Yacht Club Design, Construction & Operations 2

Building upon the basics of the previous semester, this course continues in development of design theory and practical application aspects as well as detailed study of various construction methods that may be employed to construct a new facility or upgrade an existing one. Problem solving on a day-to-day basis in the marina/yacht club environment is a key component. A "hands-on" design assignment is a primary component.

Marine Contracts, Insurance and Taxation

This fundamental law course deals with the sources of law, the Courts of Canada, Torts, Negligence, Contracts, Admiralty Jurisdiction, Law of the Sea, Proprietorship, Partnership and Corporations, Leases and Purchases of Real Property, Limitations of Liability, Time Charter Parties, Charter Parties, Salvage, Marine Insurance, Tax and other areas of general interest to the recreational marine industry.

Material Sciences

This course provides the student with an understanding of the behaviour and characteristics of metals and materials. Students will make decisions on the selection and processing of materials for engineering and manufacturing purposes.

Materials and Methods of Construction 1

In this section of Materials and Methods of Construction the student will become familiar with reference materials and sources of information pertaining to construction, gain understanding about soils, foundations and site work, and acquire knowledge about concrete and its importance as a construction material.

Materials and Methods of Construction 2

In this second section of Materials and Methods of Construction, the student will acquire knowledge about masonry, metals, wood and plastics products with emphasis on their properties and applications.

Materials and Methods of Construction 3

In this third section of Materials and Methods of Construction the student will acquire knowledge about thermal and moisture protection, doors, windows, glass and architectural finishes.

Mathematical Modes for Transportation Planning

The student will be able to create and apply mathematical models, statistical or graphical, in developing Transportation Planning Modelling Techniques to overcome the difficulties of the expansion of small data samples to represent universal behaviour.

Mathematics (Dynamics)

Dynamics is the study of objects in motion and is divided into two parts, Kinematics; the study of the geometry of motion, and Kinetics; the study of the relation between the forces acting on a body, and the mass and motion of the body.

We enlarge the concepts introduced in First Semester Mechanics and introduce graphical kinematics as a new topic.

Mathematics (Management Applications)

Application of descriptive and inferential statistics to the solution of technical management problems. Introduction to management science (operations research) techniques including cost volume analysis, decision theory, inventory analysis, linear programming and network models.

Mathematics for Small Craft & Marina Technology

This course in basic mathematics has been designed specifically for marine applications. It includes basic algebraic operations and functions, graphs, linear equations, determinants, quadratic equations, exponents, radicals, logarithms, geometry, vectors, and trigonometric functions. In addition, the course will provide an introduction to basic mechanics.

Mathematics 1 (Architectural)

Fundamental concepts and operations functions and graphs; trigonometric functions; systems of linear equations (2 equations in 2 unknowns); factoring and fractions; quadratic equations; trigonometric functions of any angle.

Mathematics 1 (Chemical)

This Math 1 course reviews the fundamental principles of algebra involving linear equations, formula manipulation, graphing, trig functions, systems of 2 linear equations, quadratic equations, vectors, exponential and log finding and variations. The student is expected to solve algebraic expressions and word problems describing applications and requiring accurate manual or calculator computations.

Mathematics 1 (Civil, Survey, Hyd. Survey, Aerial Survey, RAC/Solar)

The student will demonstrate basic skills, and be able to properly employ them in specific applications, in trigonometry, solution of linear equations, formula manipulation, variation, solution of systems of linear equations, law of exponents.

Mathematics 1 (Electrical Control Technician)

This course includes basic algebraic operations, functions and graphs, systems of two and three linear equations, simple determinants, quadratic equations, exponents, radicals, logarithms, equations and graphs of exponential and logarithmic functions, trigonometric functions and vectors.

Mathematics 1 (Electronics & Computer Engineering)

Fundamental concepts and operations; functions and graphs; trigonometric functions; systems of linear equations (2 equations in 2 unknowns); factoring and fractions; quadratic equations; trigonometric functions of any angle; vectors and oblique triangles; exponents and radicals; exponential and logarithmic functions and variation.

Mathematics 1 (Industrial/ Mechanical)

Fundamental concepts and operations; functions and graphs; trigonometric functions; systems of linear equations (2 equations in 2 unknowns); factoring and fractions; quadratic equatic trigonometric functions of any angle; vectors and oblique triangles; equations; exponential and logarithmic functions and variation.

Mathematics 2 (Architectural)

Vectors and oblique triangles; systems of linear equations (three equations in three unknowns); exponents; exponential and logarithmic functions; additional types of equations and systems of equations.

Mathematics 2 (Civil, Expl., Survey, Hyd. Survey, RAC, Solar, Energy Mgmt.)

The students will demonstrate basic skills and be able to properly employ them in specific applications in systems of linear equations, logarithms, quadratic equations, systems of equations and analytic geometry.

Mathematics 2 (Electrical Control)

This course includes graphs of trigonometric functions, trigonometric identities, complex number (rectangular, polar and exponential forms), plane analytic geometry (straight line, circle, ellipse, parabola, and hyperbola), arithmetic and geometric progression, and binomial theorem.

Mathematics 2 (Electronics & Computer Engineering)

Math 2 consists of the following sections: vectors and sinusoids; complex numbers and applications to RLC circuits, systems of three linear equations in three unknowns; quadratic equations (imaginary roots), additional types of equations and systems of equations; and a continuation of programming in BASIC in first semester.

Mathematics 2 (Mechanical/ Industrial)

Topics to be covered include three linear equations in three unknowns, use of semi-log and log-log graph paper, additional types of equations and systems of equations, equations of higher degree, plane analytic geometry, progressions and the Binomial Theorem and trigonometric equations and identities.

Mathematics 3 (Architectural)

Ratio and proportion; variation; arithmetic and geometric progressions; plane analytic geometry.

Mathematics 3 (Electrical Control)

This course includes derivatives and their applications – limits, differentiation of polynomials, products, quotients and power of functions, related rates, maximum and minimum; definite and indefinite integrals, area and volume determination by integration, other applications of integration.

Measuring Instruments 1 (Mechanical)

This course includes a review of basic physics as applied to instrumentation, and principles of sensing, measuring, computing and integrating elements and components used in the industrial measurement and control of pressure, temperature, liquid level, liquid and gas flow.

Mechanical Design and Drafting 1

The objective of this course is to enable the student to make pattern and machine drawings for castings; design and draw weldments, making use of standard welding symbols; lay out sheet metaldevelopments; and design and draw parts fabricated by machining.

Mechanical Design and Drafting 2

Upon completion of this course the student will be able to design and draw storage tanks and piping systems, design and draw structures for the support of machines and design and draw pneumatic and hydraulic cylinder systems.

Mechanical Design and Drafting 3

This course will enable the student to develop the skills to design and draw gear reduction units, and to design and draw conveyors and components.

Mechanical Power Transmission

This course is an introduction to the most commonly used mechanical power transmission elements. It discusses belts, chains, shafting, bearings, seals and gear type reducers. The student in this course will select those based on calculations considering load and performance requirements and design complete drive units.

Mechanical Technical Drawing

The student will be able to make drawings incorporating Canadian standards for first and third angle orthographic projection, dimensioning, sectional views, screw thread symbols, welded joints, fits and tolerances, surface finishes, assembly drawings and isometric drawings.

Mechanics

This course is an introduction to Mechanics with emphasis on analytical problem solving. It serves as a background to higher level or special courses dealing with specific aspects of Mechanics. The contents include vectors, translational and rotational equilibrium, linear and rotational motions, work, energy and power.

Methods of Microbiology

The student will study the basic techniques required in the identification of micro-organisms. A background in taxonomy and biochemistry will help the student to understand the principles which underlie the laboratory techniques. Areas of study include microbial nutrition, energy transformations, microbial ecology and rapid methods for the identification of micro-organisms.

Microcomputer Controls 1

This course will provide the student with a basic knowledge of microprocessor hardware, programming and interfacing, using the INTEL 8085 microprocessor. The student will be able to understand the terminology, interface an 8085 based single board microcomputer to the outside world through programmable input-output devices, and develop appropriate software to perform simple I/O operations and processing. The student will acquire some exposure to other microprocessor systems.

Microcomputer Controls 2

The operation of the microprocessor SDK-85 is reviewed with an accent on applications for various mechanical and electrical controls. Hardware and software is discussed enabling the students to write their own program in machine language.

In lab-experiments the students will build and use power-interface circuitry for time sequence controls and 3 phase-inverters.

Microcomputer Systems 1

This course deals with the fundamentals of microprocessor hardware, programming, andinterfacing. The student will learn the architecture of the 8085 microprocessor, standard interfacing techniques, and the structure of a typical 8085-based single board microcomputer. He/she will be able to interface the microcomputer to the outside world through programmable I/O devices, and develop appropriate software to perform simple processing and I/O operations. In addition, the student will acquire a general knowledge of other microprocessors.

Microcomputer Systems 2

The emphasis in this course is placed on the development of software skills. In the first part of the course the student will learn the steps of assembly language programming in a VAX/VMS-based hosted software environment, and in the second part he/she will develop programs which utilize the resources of the CP/M operating system.

Model Making 1

Models are used as three-dimensional aids in the architectural design process, and as a means of communication of completed

architectural concepts. The student will investigate both of these areas of model-making through the construction of a series of models, exploring a variety of approaches, techniques, and materials.

Modern Architecture History and Design 1

This course consists of Western Architectural History from the Egyptian period to the early eighteenth century.

Motion Study

The student will learn to analyse the various body motions employed in doing a job with the purpose of eliminating or reducing ineffective movements.

Through the use of visual motion study and micromotion study, the student will learn to analyse a given method and develop an efficient work centre.

The student will learn to establish standard times for manual operations using synthetic basic motion times systems.

Motors and Controls

After a brief introduction to the general concepts of electrical power distribution the student will be confronted with the principles of mechanical forces exerted by static and dynamic magnetic fields. The student will then study DC and AC-motors as applications of these forces. The student will analyse typical DC/AC motors and their control circuits in selected laboratory experiments.

Municipal Services 1

By applying the principles and techniques of hydraulics, municipal regulations and hydrology, the student will be able to: understand open channel flow; perform hydraulic calculations for open-channel flow and flow in pressure conduits; design the strength of buried pipes; compute run-off, time of concentration, and other parameters to design storm drainage systems; and design culverts and various types of open channels.

Navigation

This course acts as an introduction to the basics of coastal navigation. Students will become acquainted with accepted marine principles of tide calculation, position and direction, plotting techniques and passage planning. In addition, students will learn Radio-Telephone techniques and take the Ministry of Communication examination. The course culminates with the Canadian Yachting Association Coastal Navigation exam.

Numerical Control 1 (Manufacturing, Mechanical Drftg., Tool & Die, Electromechanical programs)

Students completingNC1 shall be able to operate CNC equipment in manual-jog-tape-MDI and memory modes. Also, students will be able to write part programs for simple drilling-milling and turning applications, prepare control tapes using the NC edit mode of the VT-100 alike terminals, read programs into memory, debug the programs and successfully run them on the SL-3 and MCV 410 system.

Numerical Control 1 (Numerical Control Technician)

Students completing NC1 shall be able to operate CNC equipment in manual, tape, MDI and memory modes. Also, they will be able to write and edit part programs and prepare control tapes for basic milling and turning applications.

In addition, they will be able to select the required machining parameters. They will also have a knowledge of acoustic tool breakage control and in process gauging control.

Numerical Methods

This course is an introduction to the solution of a variety of basic engineering and mathematical problems by computational methods. Topics covered will include numerical differentiation and integration, and examples of commercially available floating point packages.

Occupational Health (Chemical Substances)

This course is an introduction to the fundamentals of Occupational Health. The course covers the recognition, evaluation and control of health hazards in a working environment using toxic substances and dusts.

Occupational Health (Physical Agents)

This course is an introduction to the fundamentals of Occupational Health. The recognition, evaluation and control of health hazards in the working environment involving physical agents such as noise, vibration, heat/cold, light, ionizing radiation and non-ionizing radiation, are studied.

Organic Chemistry 1 Laboratory

An introduction to organic laboratory techniques, including simple distillation, steam distillation, liquid-liquid extraction and recrystallization. Students will also perform identification tests and organic synthesis.

Organic Chemistry 1 Lecture

A study of nomenclature, preparation, reactions, and uses of aliphatic hydrocarbons and aromatic hydrocarbons. This course will include industrial preparation of organic compounds and analysis of organic compounds.

Organic Chemistry 2 Laboratory

Students will conduct experiments on aromatic compounds, synthesize organic compounds, including pharmaceuticals, polymers and detergents.

Organic Chemistry 2 Lecture

A study of the chemistry of aliphatic and aromatic compounds and organic reactions in terms of functional groups. This course covers benzene and aromaticity, phenols, ethers, carboxylic acids and derivatives of carboxylic acids, aldehydes and ketones, and an introduction to stereochemistry.

Outboard Engines & Marine Drive Trains

A primarily hands-on course, using line engines which will involve students in the disassembly, repair and reassembly of outboard motors. The course will also provide students with an opportunity to use parts and service manuals, apply shop safety principles, and test and tune outboards.

Photogrammetry 1

Students should be able to: see aerial photos in stereo with stereoscope; determine tower heights, photo tilt and scale from single photos; determine elevation of ground from photo pairs, stereoscope and parralax bar and prepare a model ready for map compilation in a stereo plotting instrument.

Physical Chemistry

The student will learn to solve problems through application of the principles of physical chemistry: the gas laws, acid-base equilibria, spectra and the first law of thermodynamics.

Physics (Heat, Light & Sound)

In this course, the general laws governing wave motion and sound, light and heat are studied. This includes the relationship between the speed of a wave and the frequency and wavelength, the formation of standing waves, and resonant phenomena.

In the second part of the course the basic principles of illumination are described. Light is studied as another form of wave motion, and the phenomena of interference, diffraction, reflection and refraction are described.

In the final section of the course, the nature of heat is discussed. Topics covered include temperature scales, the specific heat of a body, changes of state, and the three basic methods of heat transfer, conduction, convection and radiation.

Physics (Mechanics and Waves)

This course is introduced with a review of measurement units, and technical mathematics. The use of vector analysis is described.

The concept of mechanical equilibrium is introduced, and used to solve problems involving translational and rotational equilibrium. Other topics include motion, Newton's laws, the force of friction, work, energy and power, and the mechanical properties of matter.

Physics 1

This course is an introduction to mechanics. It includes vector machines, translational and rotational equilibrium, accelerated motion, Newton's second law of motion, work, energy and power, impulse and momentum, uniform circular motion, rotation of rigid bodies, simple machines, elasticity and topics on fluids. Analytical problem solving will be emphasized. Laboratory work will also be included.

Physics 2

This course is designed to give the student an understanding of simple harmonic motions and the nature of heat and light. Topics studied include simple harmonic motion, temperature and expansion, quantity of heat, heat transfer, thermal properties of matter, thermodynamics, reflection and mirrors, refraction, lenses and optical instruments, polarization, diffraction, interferance and the nature of lights. Analytical problem solving will be emphasized. Laboratory work also forms an important part of this course.

Plant Layout

This advanced course, emphasizing economic realism, will enable the student to specify production facility and capacity requirements for a multi-product manufacturing plant of about $2,000,000/yr. He/she will integrate material handling, warehouse, inventory and material control to produce an optimum layout design, then redesign to suit a new product mix.

Plant Layout and Material Handling

This is a primary course in plant layout emphasizing the essential coordination of plant layout, material handling, industrial engineering, production control and industrial safety, from a practical standpoint. It is the objective of this course to convey the fundamentals of material handling and layout from a quantitative viewpoint. Economic realism will be emphasized in all projects.

Pneumatic Instruments

To provide the student with a sound working knowledge of instrument air supplies; pneumatic components, subassemblies and pneumatic components, subassemblies and pneumatic instruments. Students should be able to understand principles of operation, install, calibrate and troubleshoot these instruments.

Power Systems

A course dealing with the problems encountered in power systems handling electrical energy and the equipment used to operate these systems. Topics included are: common system layouts, switching arrangements, the single-line diagram; conductors, insulation and hardware; overhead, underground construction; abnormal currents and voltages, protective equipment and switchgears, metering, metering circuits and protective relaying.

Practical Photogrammetry

The course will include: review of inner, relative and absolute orientation; extensive practice in the set-up of stereo models on a variety of instruments; the use of stereo plotting instruments in the compilation of planimetric and topographic maps; practice in the measurement of plates on a stereo-comparator for analytical triangulation.

Principles of T.V.

The television course examines the signals and waveforms of the NTSC black and white and colour service. The student will follow these signals through the chassis of a modern TV receiver and will explain the operation of each circuit encountered.

The student will be shown how to make a colour set-up by use of a colour bar generator. Video games will be described in terms of how numbers and moving dots are generated on the CRT. Conversion of a B & W T.V. receiver to a computer monitor and interface to the computer will be discussed.

Problem Solving With Pascal

Structured Programming in Pascal and methodical approach to using Pascal to simulate and solve practical problems will be discussed. The prerequisite is the successful completion of 'Introduction to PASCAL' course or the knowledge of PASCAL primer.

Process Industries and Plant Safety

This course will familiarize the student with various Chemical Process Industries, in terms of principles of chemical engineering, economics, and safety.

Production and Inventory Control

In this course students learn to specify techniques necessary to synchronize the work of those concerned with production; to provide procedures for forecasting the required plant output, raw material flow, equipment and labour scheduling through the stages of manufacturing; to determine warehouse levels and order quantities to maintain low costs, meet delivery dates and assume the highest quality with the minimum of capital investment.

Programming Languages

The features and characteristics of FORTRAN and C are covered in this course on programming languages.

Project Management

Training students in planning and controlling non-repetitive projects using the techniques of PERT, CPM and their derivatives is the objective of this course. The student will be taught to formulate an effective project plan and schedule, and methods of controlling the direction of the project to successful completion after the project has begun.

Psychrometrics

The analysis of air conditioning processes, specification and designing systems using a psychrometric chart as a tool will be the aim of the course. It also prepares the student for more advanced studies of equipment selection, commercial and residential systems.

Quality Control

Upon completion of this course the student will be able to use fundamental concepts of probability and statistical process control. The student will also be able to use various quality concepts and techniques such as quality budgets, design review, vendor certification, inspection and test planning and non-conforming material disposition. The student will also be able to apply various reliability analysis techniques.

The course is designed for those students who have successfully completed Statistics and Metrology.

Refrigeration Systems 3 (Commercial)

In this thorough review of low temperature and various commercial refrigeration systems, equipment and practices, the emphasis will be on design, analysis and evaluation.

Refrigeration 1

The student will learn the basic principles of thermodynamics and their application to the refrigeration system. The course also deals with the purpose and operation of the various component parts used in the system in preparation for a more detailed study in Refrigeration 2.

Refrigeration 2

The student will learn the application of fundamentals learned in Refrigeration 1 to more complex systems and an in-depth study of equipment and component parts including their correct sizing and application. The course also encompasses the operation and characteristics of centrifugal and absorption systems.

Rendering Techniques 1

The student will be able to produce (a) plan and elevational presentation drawings using basic pencil techniques, including different technical and artistic aspects such as (b) technical shading, rendering of different building materials and landscaping, one-point, two-point (vanishing point) perspective drawings, with supporting elements, such as landscaping cars and people.

Residential Systems

The student will size, select and specify residential forced air heating and cooling equipment. Gas, oil and electric energy systems are compared with respect to their designs, rating components, control requirements and installation. The course includes blowers and motor sizing, humidification equipment, and electronic cleaning methods.

Safety Program Development

Having completed five semesters of specialty courses for Safety and Occupational Health, this course is designed to allow the student to undertake indepth, on-the-job analysis and/or development of a viable safety program.

Sailing School, Charter Fleet Operation & Yacht Brokerage

In three parts, this course examines the organizational and operational aspects of running a sailing school, investigates the mechanics of a charter fleet operation and yacht delivery and will provide an overview of yacht brokerage.

Sails & Rigging

An introduction to the fundamentals of traditional and contemporary yacht rigs and sails. The course will deal with the basic concepts of engineering applied to masts, rigging and related hardware. Students will become acquainted with the theory of how sails work, basic sail design materials and construction.

Seamanship 1 – Small Boat Handling, Power & Sail

A basic course, this on-the-water program is designed to acquaint the student with the handling characteristics of small sail and power vessels in varying confined and lake conditions. The sailboat portion provides instruction to the Canadian Yachting Association White Sail Level 2.

Seamanship 2 – Power & Sail Yacht Handling

This course is designed to provide the student with practical experience handling larger yachts, under sail and power. The sailboat portion provides

instructions to the Canadian Yachting Association Basic Cruising Standards.

Site Management Technology 1

The student will study the in-house relationships and inter-relationships between owner, engineer and contractor. The roles of various personnel involved in the management process will be examined. Methods of site management will be studied including administration, contracts, cost control, project scheduling, inspections and jurisdiction, final takeover and guarantees.

Small Craft Electronics

A basic introduction to the hardware of small craft electronics, emphasizing the sale, installation and maintenance of such hardware in a marina and yacht club environment.

Software Projects 1, 2 and 3

These courses use case studies drawn from industry to simulate an industrial programming environment.

Soil Mechanics

On completion of this course in the fundamentals and basic principles of soil mechanics, the student will be able to assist in routine laboratory and site testing of soils for its application in the construction industry.

Solar Lab

The student will perform a set of designated laboratory exercises which will expand on and illustrate the principles studied in Solar Energy I.

Solid State H.V.A.C. Controls

This course provides the student with basic electronic technology used in control systems. This will include the operation and use of transistors and diodes. Various circuits including power supplies and amplifiers will be studied.

Specification Writing

The student will interpret and apply specifications as a technical and legal element of the contract documents. The students will participate in the presentation of specifications compatible with working drawings.

Standard Operating Procedures & Office Routine

This course encompasses the basic office procedures including bookkeeping, file maintenance, fundamental accounting, payroll records, banking, word processing, cash flows and corporate structures. Small business start-up, credit control, office equipment, purchasing methods and legislation effecting the day-to-day operations of a marina or yacht club business are some of the areas covered in this rather broad program that will familiarize the student with maintaining a sane and smooth running office environment.

Statics (Mechanical & Civil Programs)

This course is primarily a problem solving course which prepares the student for more advanced and specialized courses requiring a general knowledge of equilibrium. It provides the student with an approach and a method of analysis of practical systems. Emphasis will be placed on physical problems which will require an elementary knowledge of our physical world.

This course is designed for Technology students who have successfully completed the first semester Mechanics & Mathematics courses.

Statics and Strength of Materials 1

A continuation of statics with the introduction of the concepts of internal forces in members, compression and tension, simple stress, simple strain, shear and moment in simple beams, as found in basic architectural structures.

Statics: Architectural

Working from a firm qualitative understanding of the nature of forces, types of loads, bearing and non-bearing structural elements, and types of structural systems, the student will progress to the basic quantitative concepts of resolution of forces, equilibrium, reactions, couples, moment, free-body diagrams and centroids.

Statistics (Chemical)

This course introduces the student to many of the important statistical concepts and procedures necessary to evaluate data and to make better decisions associated with chemical experiments. The course is divided into descriptive statistics, sampling theory and practice, and changes and forecasting.

Statistics (Industrial/Safety, Manufacturing)

Students will learn measures of central tendency, measures of variation, frequency distributions and their pictorial presentations, binomial distributions, poisson distributions, normal distributions, sampling distributions, confidence intervals and curve fitting.

Statistics (Transportation Planning, Hydro Survey & Survey)

Students will learn matrix algebra operations and will review the following matrix operations: matrix addition and subtraction, scalar multiplication, matrix multiplication and inversion and evaluation of determinants. They will also solve problems involving the use of matrix operations on the mainframe computer.

Stoichiometry

By mastering the basic principles of chemical stoichiometry, the student will be able to logically analyse and solve chemical problems and to understand the chemical principles letter.

Stress Analysis

This is a continuation of the course in Basic Strength of Materials with special emphasis on the stress developed in mechanical components due to static and dynamic load conditions. An introduction to more advanced techniques is included.

Structural Drafting (Architectural)

The student, using the basics of structural drafting, will produce structural drawings; plans; sections and details of wood; steel; and reinforced concrete structures for given buildings.

Structural Drafting (Civil)

Having acquired the drafting skills learned in the basic course "Construction Technical Drawing", the student on completion of this follow-up course will be able to draft structural layouts used for working drawings in steel, and timber. Concrete layouts will be confined to footing and retaining wall details.

Survey Camp 1

In a two-week period the student will work on several projects such as; retracing of a legal boundary, determination of volume from contours, layout of a long obstructed line, tracing of a contour and topographic survey with autoreduction instrument.

Survey Computations

The student will be able to: solve the quadrilateral by general sine law; use coordinates to calculate intersections of lines and circles; use polar coordinates; calculate the coordinates of a right angle offset, the coordinates from observed distance, the transverse with an inaccessible terminal and transverse tied into an azimuth and position control; and do the simple transformation of coordinates. Problems will be solved with the use of hand calculators and computers, using CoGo programming language.

Survey Drawing 1

The student will be able to do freehand lettering and sketching in pencil as well as use 'leroy' equipment for mechanical lettering in ink and also linework in ink.

Survey Drawing 2

Students will be able to produce various survey plans using field notes of actual surveys and performing necessary calculations.

Survey Law 1

The student will be able to describe the evolution of the Survey Profession in the Province of Ontario and the Statutes related thereto, namely The Surveyors Act and The Surveys Act.

Survey 1

330-038

Students will be able to measure distances with a steel ribbon tape, use the engineer's transit to measure angle by repetition, use the dumpy level to determine differences in elevation, locate permanent features on the earth's surface with respect to traverse lines, use the method of spot levelling to determine elevations of selected points and to do the calculations related to the above objectives.

Survey 2

Students will be able to operate an optical theodolite and an automatic and tilting level, determine trigonometric elevations, do the stadia surveys, survey the profile and cross-sections, draw the plan of location surveys and stadia topography. Students will also be able to perform calculations related to the above mentioned surveys.

Surveying

The student will perform distance measurements with the steel tape, angular measurements with the engineering transit, determine elevations with the use of the dumpy level, locate permanent objects with respect to traverse lines and the plotting of a plan of surveys performed. The student will also do some basic calculations related to plan surveying.

Surveying 1

The student will measure distances with a steel ribbon tape, use the engineer's transit to measure angle by repetition, use the dumpy level to determine differences in elevation, locate permanent features on the earth's surface with respect to traverse lines, use the method of spot levelling to determine elevations of selected points and do the required calculations.

Surveying 2

The student will be able to operate an optical theodolite and an automatic and tilting level, determine trigonometric evaluations, do the stadia surveys, survey the profile and cross sections, draw the plan of location surveys and stadia topography. Students will be able to perform calculations related to the above mentioned surveys.

Technical Project (Civil)

The technical project will consist of 3,000 to 5,000 words in the body of the report on a subject related to the students' course of study . The report may be an account of research work done or a comprehensive study of some topic which would demonstrate technologist level of technical and mathematical depth and report writing expertise.

Technical Project (Electronics)

The student will select and complete a suitable TECHNICAL PROJECT. It could involve the design of hardware or software or an indepth library study of some electronics topic. Upon its completion the student will be more knowledgeable in some technical topic.

Technical Project (Field) (Manufacturing)

The student will explore in some depth a technical subject and then present it in report form. The presentation will be in line with some of the basic rules of report writing. An attempt will be made to organize plant tour activities in line with the subject (theme) chosen.

Technical Project and Report (Solar)

A continuation of Solar Project 1, students will complete their detailed study of a particular topic in the solar energy field. The project will be conducted with the guidance of a staff member and will result in a fully documented report, complete with drawings, all relevant supporting data and a working prototype or computer program (where applicable). Each student will give a seminar presenting the results of the project.

Technical Report (Chemical)

The students will initiate, research, prepare, write up, type and present a 4,000 to 5,000 word report relating to a predetermined topic in their field.

Technical Report (Civil)

The student will be instructed in the areas of sound technical report writing and will be required to produce concise, grammatically error-free reports on topics including: minutes of meetings, resume writing, site inspections and laboratory tests.

Technical Report (Explosives)

The student will be able to: choose, research, prepare, write up and type a 4000 to 5000 word report relating to the development, manufacture storage or field use of explosives.

Technical Report (Solar)

The student will carry out a detailed technical study on some aspect of solar energy science or technology. The project will be selected in consultation with a staff member and result in a fully documented report, complete with drawings and all relevant supporting data.

Technical Report (Survey)

The student will be able to prepare, perform and report on a survey-related project that will test the practical ability and theoretical knowledge acquired during the college studies, under the supervision of the instructor. The final result of the project will be an elaborate written report containing planning, field records, calculations, diagrams, plans, theoretical proofs, accuracy analysis, research, procedures, possible improvements, or any other aspects of the project.

Telecommunication Systems

The operation and characteristics of the analog telephone system are investigated, along withFDM systems, narrow and broadband operation of transmission lines, cable types, and low speed asynchronous modems.

Theory of Traffic Flow

The student will be able to perform calculations regarding the safe motion of vehicles. This includes friction forces between tires and asphalt, acceleration and deceleration rates, stopping distances, centrifugal forces, superelevation, and safe highway curves.

Time Study 1

This course introduces Industrial Engineering, describing its place in the world of business and providing an overview of its functional areas. Topics include: productivity and method engineering as a method of increasing productivity, principles of work measurement, time study.

Tool & Fixture Design

This course will enable the student to understand what tool design is and its place in industry. Procedures of blueprint reading for tool design purposes, tool drafting, vs other drafting techniques; selection rules for dimensioning and tolerancing will be discussed. The student will be involved in drafting and form cutting tools, gage design, clamping and holding fixtures for N.C. equipment and drill jigs. Knowledge of mechanical drafting is deemed essential.

Total Loss Control

Health and safety problems represent a loss of people in the workplace, on the highway, in their homes and at recreation. Cost effective programs can be developed that reduce these problems and provide an improved quality of life in our society.

Traffic Survey Methods

Upon completion of the course, the student will be able to use a variety of traffic survey instruments, various methods of data collection and will be able to analyse and report the information collected for use in different kinds of traffic and transportation studies.

Transportation Design Systems

Having completed the course the student will have an overall knowledge of the various transportation systems. He will be able to weigh the advantages of the various modes of transportation under given circumstances.

Transportation Planning Project 2

The student will be able to perform tasks as a member of a planning study group.

The student in performing this task will be able to carry out library research, collect data by consulting reports of similar studies or by preparing, distributing and evaluating questionnaires. He will be able to analyse the accumulated information and to inform the group of results, conclusion and recommendations.

The student will be able to initiate, organize and guide subgroups to perform such dependent tasks as will be needed to complete the general task.

Troubleshooting

The emphasis of this course is on allowing the student to develop reliable troubleshooting procedures necessary for the rapid repair of analog or digital prototype or failed equipment encountered in the field.

The student will learn to select and use the appropriate test equipment, to effectively locate faults in discrete and integrated circuit analog and digital equipment.

Urban Transportation & Mass Transit

This course is intended to give the student a fundamental understanding of the determinants of public transit demand and mass transit's role in the development and redevelopment of urban areas.

The understanding and application of the various methodologies and survey techniques available to assist the transportation practitioner with the planning and laying out of transit networks, service design, service scheduling and network evaluation and analysis will constitute the majority of the study program.

The course will include the study and evaluation of various transit systems in operation today.

Workshop Practices

The purpose of this course is to familiarize the student with instrument shop practices. Students will gain an understanding of the basic principles of safety; learn how to prevent accidents and develop procedures to be followed in case of accident; and gain understanding of properties of various metals, metal tubing; and learn the proper use of tools, and measuring instruments. Students will also learn to perform practical tasks such as use of micrometers, fabricate pointer puller, fabricate manifold, perform tube bending and learn soldering techniques.

Yacht Design 1

A basic introduction to the fundamentals of yacht design, with emphasis on the basic concepts of buoyancy, flotation and stability.

Yacht Design 2

This intermediate course on yacht design, with emphasis on the hydrodynamics of sail and power yachts will help understand design drawings.

Yacht Maintenance & Repair 1

A basic introduction to the practical maintenance and repair of fibreglass, wood, steel, aluminum, and ferrocement yacht hulls, decks, superstructures, and ancillary equipment. Fall haul-out, lay-up procedures and winterizing procedures will be included.

Yacht Maintenance and Repair 2

Building on the concepts and skills studied in Yacht Maintenance & Repair 1, this course will also deal with spring tune-up, commissioning of boats and the repair and maintenance of small craft systems (pumps, stoves, heads steering). The course, heavily practical in nature, will also involve students in the launching of sail and power boats in a marina or yacht club setting.

Campus Locations

1 North Campus
205 Humber College Blvd.,
Rexdale, Ont. M9W 5L7
Phone: (416) 675-3111

2 Osler Campus
5 Queenslea Avenue
Weston, Ont. M9N 2K8
Phone: (416) 249-8301

3 Keelesdale Campus
88 Industry Street
Weston, Ont. M6M 4L8
Phone: (416) 763-5141

4 York-Eglinton centre
1669 Eglinton Ave. W.,
Toronto, Ont. M6E 2H4
Phone: (416) 763-5141

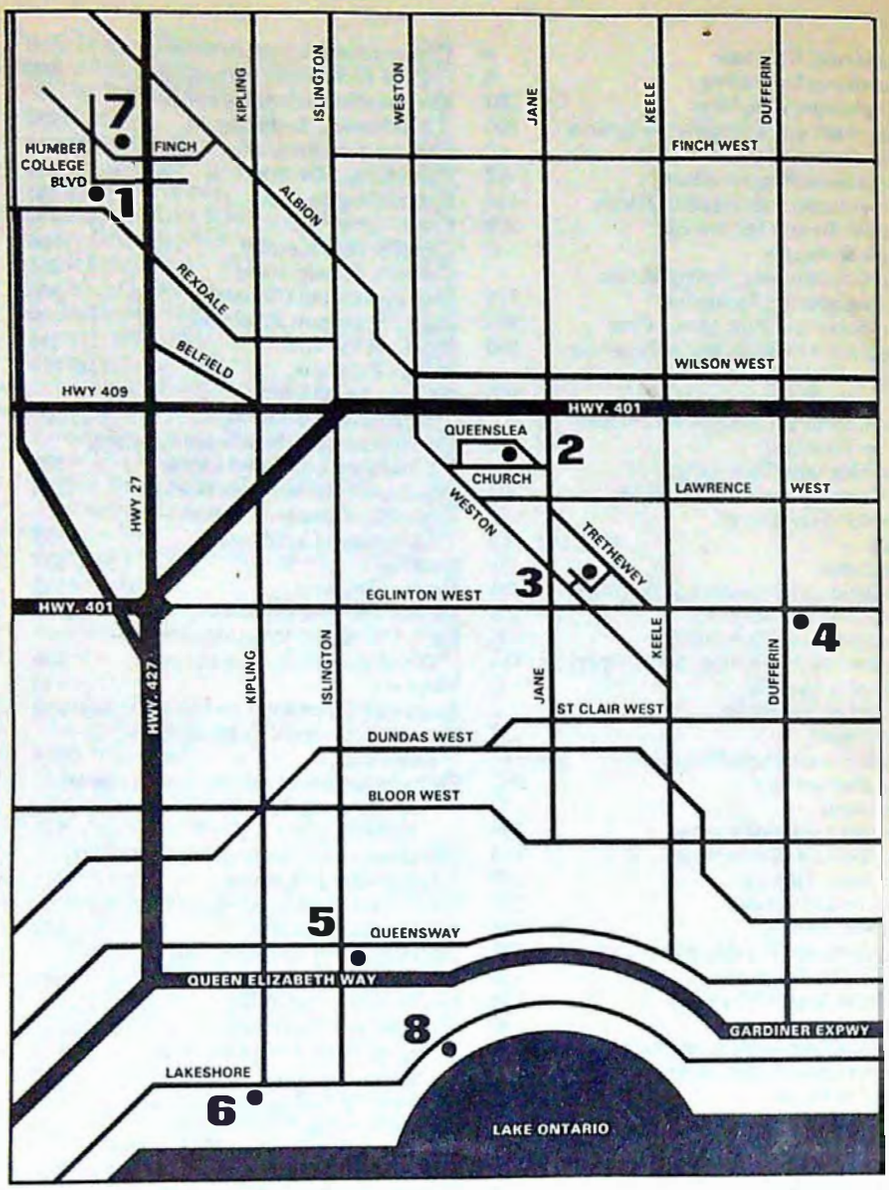
5 Queensway Campus A
56 Queen Elizabeth Blvd.,
Toronto, Ont. M8Z 1M1
Phone: (416) 252-9441

Queensway Campus B
70 Queen Elizabeth Blvd.,
Toronto, Ont. M8Z 1M3

6 Lakeshore Campus
3199 Lakeshore Blvd. W.,
Toronto, Ont. M8V 1K8
Phone: (416) 252-5571

7 Humber Tower
Kellogg Salada Canada Inc.
6700 Finch Ave. W.,
Rexdale, Ont. M9W 5P5

8 Humber College
Sailing School
Humber Bay (West)
Lakeshore Boulevard
West of Park Lawn Rd.



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***Program unique to Humber**

Important Phone Numbers

North Campus	
Athletics	675-5097
Bookstore	675-5044
CL Registration Part-Time Information	675-5005
Counselling	675-5090
Financial Aids Office	675-5001
Housing Information	675-5053
O.C.A.P. (training on the job program)	675-5066
Placement	675-5028
Registrar's Office Full-Time Information	675-5000
Secondary School Liaison	675-3111 Ext. 4301
Keelesdale Campus	763-5141
Lakeshore Campus	252-5571
Osler Campus	249-8301
Queensway A + B Campuses **Technical short programs**	252-9441
York-Eglinton Campus	763-5141

Declaration of Waiver

The information in this calendar is accurate as of August 1, 1984. The College does its best to up-date calendar information regularly so that students are not inconvenienced. However on occasion, changes do occur. Therefore, after August 1, 1984, the College reserves the right to modify or cancel any program, option, course, program objective, fee, timetable or campus location without notice or prejudice. It is also the College's right to schedule classes any time, Monday through Saturday. Students should be aware that it may be necessary for them to take a course or courses during the evening or on Saturday.

Project Manager: Lori Fournier
Manager, Publications and Advertising: Charlotte Boulanger
Design: Kelly Lavoie & Associes, Peter Perko
Production: Christine Little, Peter Perko
Photography: Tony Moore (cover), Steve Behal, Gary Gellert

At the time of this photograph, our models were all Humber students. From left to right, back cover to front cover, they are: **Cameron Hobden,** Electronics; **Liliana Conte,** Fashion Modelling; **Anna Kunz,** Public Relations; **Stacey Nishimura,** Marketing; **Darrell Kublick,** Civil Engineering Technologist; **Teresa Wiacek,** Public Relations; **Louis Tucci,** Theatre.

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See you next year