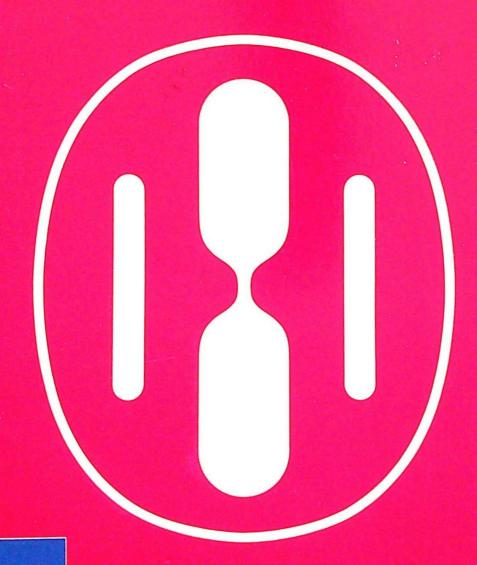
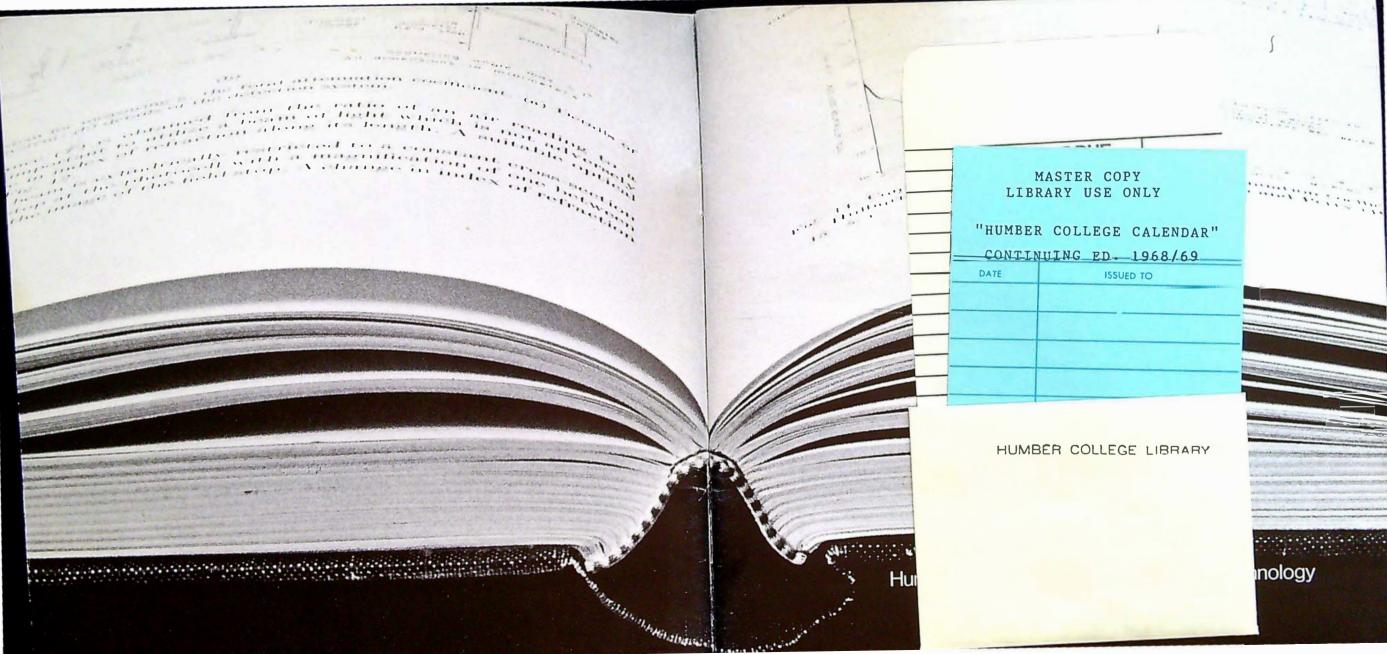
Continuing Education Calendar 68/69



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General Information 5

Evening Classes will be offered in the subjects listed on the following pages commencing September 30, 1968. The first semester begins Monday, September 30 and ends Saturday, December 21, 1968. The second semester begins Monday, January 20 and ends Saturday, April 12, 1969.

Admission Requirements

Credit Subjects

Students entering credit subjects must either have a minimum of grade 12 of any secondary school program, or qualify as a mature student. A mature student is a person who is over 19 years of age, has not completed grade 12 of a secondary school program, and has at least one year of work experience or equivalent as determined by the Board. All students who apply to enter Humber College as mature students must take the mature student tests. The purpose of the mature student test is to determine whether an applicant is capable of performing at a grade 12 level. These tests are confidential, and will be held for evening applicants on Thursday, September 26, at 7:00 p.m. Duration, 3 hours.

Special Interest Courses

Unless otherwise stated these courses are open to anyone interested in improving his knowledge in a specific area.

Certificate Programs

Where formal admission requirements for these programs are necessary, they are included in the program descriptions.

Course Location

Classes will be given at the following locations:

Applied and

Liberal Arts* Southern Campus
Business Administration Northern Campus
Creative Arts Northern Campus
Technology Southern Campus
Trades & Preparatory Queensway

Subjects Campus

*Food Service and all horticultural courses will be held at Northern Campus. Campus locations are indicated on the map included in this brochure. Ample parking is available at all three campuses.

Minimum Enrolments

Classes may be cancelled where attendance does not reach the required minimum.

Text Books and Supplies

Text books may be purchased on the campus at the student book store during the first two weeks of classes.

Certificates

Appropriate certificates are awarded to all students successfully completing credit, special interest and "certificate" courses.

Registration

In person at the Southern Campus, 3495 Lakeshore Boulevard West, between the hours of 7:00 p.m. and 9:30 p.m. on the following evenings:

Monday, September 23rd Tuesday, September 24th

Wednesday, September 25th

Registrations will be accepted by mail provided

they are accompanied by money order or cheque.

Special Note: Students currently enrolled in Secondary School day classes are welcome to attend the evening program provided they have the written agreement of their Guidance Counsellor.

Fees

Unless otherwise stated the fees for all courses are as follows:

12 sessions: \$20.00 24 sessions: \$35.00 48 sessions: \$50.00

Fees must be paid by cash, money order or

cheque.

Identification

The second copy of the receipt is the admit to course identification and must be shown to the instructor at the beginning of the course.

Refunds

The Registrar will consider requests for refunds when presented before the third lesson of the course. In all refund cases a \$2.00 fee will be deducted. Requests for refunds are to be accompanied by the first copy of the receipt.

Co-Operative Programs

The Continuing Education Division is interested in developing co-operative programs with Business, Industry, Association and Community groups. Some of the courses described have been developed in cooperation with such organizations. Interested organizations should contact the Director of Continuing Education, David J. Pugsley (telephone number 259-8401.)

Information Service

For information call the CONTINUING EDUCA-TION DIVISION, telephone number 259-8401

Counselling Service

The Counselling services provided include: vocational-occupational information; evaluation of personal characteristics, abilities and interests: assistance in adjustment to academic life. These services are available at the following times: Thursdays, 6:00 p.m. to 10:00 p.m. at Southern Campus; Saturdays, 9:30 a.m. to 12:30 p.m. at Northern Campus; Monday through Friday. 8:30 a.m. to 5:30 p.m. at all campuses. Appointments should be made in advance by telephone.

Credit Subjects

200 Introductory Philosophy: Mankind's Search for Values

Mondays, 7:00 to 10:00 p.m.

Those enrolled in this course will engage in a study of "values" through self-examination and self-criticism, as well as through examination of the contribution of philosophy, psychology, the social sciences, religion and art to knowledge of this subject. Fee \$35.00, 24 sessions.

201 Introductory Economics

Tuesdays, 7:00 to 9:00 p.m.

Today's society is an economic one. The efficient production and equitable distribution of goods is a primary concern of every citizen. This course will introduce the basic theories on which our economic society is built and will enable you to understand its workings better. Such an understanding will be of benefit in both business and social activities to persons such as Supervisors, Foremen, Staff Personnel, Production Workers, Husbands and Wives seeking a greater understanding of how our economic system operates. Fee \$35.00, 24 sessions.

202 Popular Media of Communication

Wednesdays, 7:00 to 10:00 p.m.
Each medium of communication is like a language, which not only informs us but tends to deform human experiences according to its own patterns and rules. That is, each medium has a bias and tends to pattern its devotees after itself. What happens when one medium becomes the predominate means of communication, as print once did? What happens in

an age of many media, bombarding us from many sides? What are the social effects of print, TV, movies, and the other media on the social life of the 1960's? Among the basic prerequisites for autonomous living is the study of the media of communications, which affords knowledge and freedom from control by them. Lectures will be at a minimum, discussion of assigned material will be stressed. The class will try to formulate for itself what it means to live in the 1960's, as distinct from any other decade. Fee \$35.00, 24 sessions.

203 Psychology

Thursdays, 7:00 to 10:00 p.m.

Human behavior is a subject that men have found both fascinating and puzzling all through recorded history. People find themselves acting and reacting from motives which are partly known and partly unknown to themselves. The purpose of this course is to examine and clarify the sources of human behavior which are more or less within one's ordinary awareness, and to bring to light those which are generally hidden. Fee \$35.00, 24 sessions.

204 Shakespearian and Elizabethan Drama Mondays, 7:00 to 10:00 p.m.

Shakespeare, in his uniquely personal way, and the period in which he lived seem to have been characterized by an understanding of man that makes a rereading of Renaissance literature an ever rewarding human experience. The focus of this course will be Shakespeare himself, but its scope will be enlarged by the study of a few of the masterpieces written before and after his own time. Fee \$35.00, 24 sessions.

205 Turf Management I

Mondays, 7:00 to 10:00 p.m. Employees of golf courses, parks, nurserymen, and landscapers will benefit from this course, where the use of slides and live materials in greenhouses, together with theory will help them to pursue their chosen career more beneficially. The course will be a basic study of Turf. stressing the development and maintenance of lawns. Fee \$20.00, 12 sessions.

206 Floriculture I

Tuesdays, 7:00 to 10:00 p.m. Employees of golf courses, parks, nurserymen and landscapers will benefit from this course, where the use of slides and live materials in greenhouses, together with theory, will help them to pursue their chosen career more forcefully. The course will cover the study of flowering plant material, recognition and general culture. Fee \$20.00, 12 sessions.

207 Arboriculture I

Wednesdays, 7:00 to 10:00 p.m.

Employees of golf courses, parks, nurserymen and landscapers will benefit from this course. where the use of slides and live materials in green houses, together with theory, will help them to pursue their chosen career more effectively. Course includes: Analysis of woody plant material; Culture of woody plant material; Recognition and general growth; Planting techniques; Landscaping. Fee \$35.00, 24 sessions.

208 Drama Workshop

Tuesdays and Thursdays, 7:00 to 10:00 p.m. The workshop is planned to give a balanced

insight into the theatre. The students will obtain a comprehensive background so that if they wish to enter the field they will have a sound foundation for further development. The use of experimental scripts by participants is encouraged. Also workshop experiments using concepts evolved or suggested by students will be operated. Fee \$35.00, 24 sessions.

209 The Modern English Novel

Wednesdays, 7:00 to 10:00 p.m. A study of the writers that have shaped the novel of the 20th century. Selected novels of Joyce, Lawrence, Hemingway, Twain, Greene, Waugh, Orwell and Golding. Fee \$35.00, 24 sessions.

210 Contemporary Man's Search for Himself Mondays, 7:00 to 10:00 p.m.

This course is also known as Literature, Psychology and the Search for Meaning. Contemporary man is searching for himself. Amidst today's rapid changes, he often feels that he has not yet even met himself. Yet, for the Greeks, that was the first of all human tasks: "Know Thyself." This is a course designed to help man meet himself. It hopes to create an atmosphere in which people can discover that it is deeply satisfying to think together about the complex workings of their own mind and the exciting human task of participating in man's search for meaning. Fee \$35.00, 24 sessions.

211 Journalism General

Tuesdays, 7:00 to 10:00 p.m.

The emphasis in this course will be to teach the techniques of writing for print and broadcast media. It will deal with the gathering of news

and the production of features for newspapers and magazines, but will also discuss fiction writing for print and radio and television. Some editing and layout will be taught, as well as the mechanics of newspaper production, although more stress will be placed on the writing of copy to professional standards. Fee \$35.00, 24 sessions.

Certificate Programs

Journeyman Chef Certificate Program

The certificate program is open to those persons who desire a recognized certificate as credit. A certificate is granted by Humber College following satisfactory completion of the six (6) subjects listed below. These subjects can also serve as credits towards the day program. All six subjects will be offered in the fall provided there is sufficient registration. This course is endorsed by the Canadian Restaurant Association.

International Cooking	212
Cooking for Special Occasions	213
Practical Commercial Cooking for	
Hotels and Restaurants	214
Practical Baking	215
Theory of Cooking	216
Profitable Restaurant Operation	217

212 International Cooking

Tuesdays, 7:00 to 9:30 p.m. Lectures, demonstrations and student participation are designed to teach practical cooking of international cuisine. Emphasis will be

placed on classical cuisine of various countries: French, Italian, Canadian, Jewish, Chinese, Danish, Russian, Ukrainian, Hungarian, Spanish and Austrian, as well as cuisine of other countries. Classical menu and wine selection will be discussed and the preparation of soups. sauces, main course dishes, salads and desserts. This course is offered to those persons who desire basic knowledge of international cuisine. Fee \$35.00, 24 sessions.

213 Cooking For Special Occasions

Wednesdays, 7:00 to 9:30 p.m.

Demonstrations, lectures and student participation are designed to teach the preparation and service of buffet. Included is menu planning, preparation and service of buffet for festive occasions, decorating and glazing buffet centrepieces, cooking with herbs, spices and wine, cocktail preparation for businesses and homes. selection of wine, hot and cold hor d'oeuvres, classical salads, cooking Venetian Fritto Misto, fancy sandwiches, casserole and chafing dishes. Flambe cookery is also covered. This course is offered to those persons who desire to obtain a basic knowledge of buffet preparation. Fee \$35.00, 24 sessions.

Practical Commercial Cooking for Hotels and Restaurants

Tuesdays, 7:00 to 9:30 p.m.

Demonstrations, lectures and student participation are designed to teach practical cooking with a difference. Included are cooking with herbs, spices, wine and spirits, menu planning and portion control, practical uses of commercial equipment and the preparation of basic stocks,

soups and sauces. Professional methods of preparing and cooking meat, fish, seafood, pasta products, vegetables, poultry, salads and egg dishes and the introduction of dessert preparations are included in the course. Fee \$35.00. 24 sessions.

215 Practical Baking I

Wednesdays, 7:00 to 9:30 p.m. Special emphasis will be placed on selection. quality and visual presentation. The course will also include demonstrations and student participation. The basic theory of baking will be covered as well as the techniques and methods of baking cakes, puff pastries, Swiss pie, pastries, cheese cake, gateau, cookies and breads. Fee \$35.00, 24 sessions.

216 Theory of Cooking

Thursdays, 7:00 to 9:30 p.m.

Preparatory course for examination for chef's certificate issued by the Ontario Department of Labour and Federal Manpower Department. This course is designed for persons who are presently employed in the food industry and wish to upgrade their knowledge in theory of cooking. Candidates must possess a good command of the English language and must have an educational standing of grade 10 or equivalent. The course includes theory of food, sanitation and hygiene, food and nutrition, theory of baking, butchery and cooking, theory of dining-room service, pricing recipes, food cost, menu planning, and equipment and kitchen layout. Fee \$35.00, 24 sessions.

217 Profitable Restaurant Operation

Thursdays, 7:00 to 9:30 p.m.

A course for restaurant management - first year. This course is designed for restaurant management personnel who wish to learn modern and profitable restaurant management. Candidates must possess a good command of the English language and must have educational standing of grade 10 or equivalent. The course includes accounting, menu merchandising. advertising, public relations, banking, sanitation and hygiene, menu planning, food cost control. basic theory of cooking, equipment and kitchen layout, and Legislation and Labour Law. Fee \$35.00, 24 sessions.

Preparation of Teachers in Pre-School Education

This is Part 1 of the three part course designed by the Nursery Education Association of Ontario to provide minimum requirements for the preparation of Nursery School teachers. It will be spread over three semesters - Fall, Winter and Spring or Summer.

Semester	1:	Child Development	218
Semester	2:	Pre-School Education I	219
Semester	3:	Elementary Psychology	220
		Nursery School Practice 1	221

Part II and Part III will not be offered during the 1968-69 term.

Admission Requirements: Ontario Grade 12 graduation diploma or equivalent. Consideration may be given to mature students who do not meet this academic requirement. First consideration will be given to those who are presently

engaged in the nursery school field. If space permits, married women with families will be given next consideration.

218 Child Development

Wednesdays, 7:00 to 10:00 p.m.

Available in the fall of 1968. A foundation subject dealing with the concept of human development, to include the study of fundamental changes in behavior from infancy through adolescence. The purpose of the course is that the student view the child in a developmental content. It is prerequisite to Psychology of the Pre-School Child. Opportunities will be arranged for students to observe the activities of children of various ages in a variety of settings. Fee \$20.00, 12 sessions

219 Pre-School Education I

Wednesdays, 7:00 to 10:00 p.m. Available in the winter semester, 1969. A practical course which introduces the student to the essential elements of a daily program in a nursery school and to the teacher's role in each aspect of this program. The purpose is to prepare the student for initial participation. Observation and practice will accompany this course, and discussion will be related to experience. This unit is prerequisite to Pre-School Education II and III which deal in greater depth and detail with special approaches and areas of early education and guidance. Fee \$20.00, 12 sessions.

220 Elementary Psychology

Wednesdays, 7:00 to 10:00 p.m. Available in the third semester. A foundation subject to acquaint the student with psychological

concepts basic to an understanding of human behaviour and to introduce him to an objective psychological way of thought. It is prerequisite to the full course of studies and both an introduction and test of the student's preparedness to study in depth. Fee \$20.00, 12 sessions.

Nursery School Practice I

Observation and participation in a selected nursery school under approved supervision and linked with the Pre-School Education Subject.

Community Leadership and **Leadership Development**

Wednesday, 7:00 to 9:30 p.m.

This course was developed by the Etobicoke Recreation Department. A tri-level presentation toward (enhancing; supplementing) the leadership potential in individuals. This course is provided to give present and future leaders. (young and old; 16-66), an opportunity to familiarize themselves with the basic tools of leadership (agendas, rules of order, duties of officers, election procedures, et al); to understand the techniques of group process (program planning, membership involvement, evaluation, discussion methods, et al); to become sensitive to themselves and others (strengths and weaknesses) and become acquainted with the dynamics of communications.

Semester 1: The Organization 222 Semester 2: The Leader and the Member 223

Semester 3: Human Relations 224

Semester 1 is open to all interested persons. Fee \$20.00, 12 sessions.

Semester 2 is open to those persons successfully completing Semester 1 and persons having 2

to 5 years practical leadership experience. Fee \$20.00, 12 sessions.

Semester 3 is open *only* to persons successfully completing Semester 2. Fee \$20.00, 12 sessions.

Family Life Development

A two year certificate course dealing with all aspects of family life from infancy to old age. It is designed for parents, teachers, people in social agencies and others who are interested in increasing their knowledge in this field, keeping abreast of current insights and deepening their understanding of themselves in relationship to other members of the family. Persons obtaining the certificate must complete the following subjects:

Childhood	225
Adolescence	226
Married Life	227
Family Life	228

225 Family Life Development — Childhood *Tuesdays*, 7:00 to 10:00 p.m.

The course covers the psychological development of children; normal and abnormal development patterns; developmental differences between the sexes; child-parent relationships; communications. Fee \$35.00, 24 sessions.

226 Family Life Development — Adolescence Thursdays, 7:00 to 10:00 p.m.

Adolescent growth and development; developmental differences of the sexes; adolescent-parent relations and communication; love, sex and dating behaviour; social pressures on adolescents (alcohol, drugs, etc.). Fee \$35.00, 24 sessions.

227 Family Life Development — Married Life Wednesdays, 7:00 to 10:00 p.m.

Early years of marriage; factors which build a successful marriage; constructive and destructive aspects of conflict; communication in marriage; crises in marriage; love and sex; effective management of income; preparing to become parents. Fee \$20.00, 12 sessions.

228 Family Life Development — Family Life Wednesdays, 7:00 to 10:00 p.m.

This subject will be offered in the second semester. Emotional adjustment to parenthood; crises in family life; developing solidarity and values; the family and the community; family dismemberment; the later years; role of male and female. Fee \$20.00, 12 sessions.

Leadership and Family Life Counselling

The course will be a two year certificate course directed to professional persons. The course is designed to (a) increase the knowledge of those persons already functioning in leadership roles in the field of social welfare or related disciplines, and to (b) provide an opportunity for up-grading leadership skills. It will be focused in the developmental process, dealing with family life as it relates to childhood, adolescence, married life and family life. A certificate will be awarded upon successful completion of the following subjects:

- 229 Leadership and Childhood
- 230 Leadership and Adolescence
- 231 Leadership and Married Life
- 232 Leadership and Family Life

229 Leadership and Childhood

Thursdays, 7:00 to 10:00 p.m.

This course will be offered in the fall of 1968 and will consist of: techniques of counselling; using community facilities; materials and resources; communication; social groupings and then differing value patterns; recognizing and coping with mental health problems; developmental differences of the sexes; psychology of childhood development; normal and abnormal developmental patterns; child-parent relations (including a child's point of view). Fee \$20.00, 12 sessions.

230 Leadership and Adolescence

Thursdays, 7:00 to 10:00 p.m.

This course will be offered in the second semester and will consist of: techniques of counselling; using community facilities; materials and resources; communication; sound groupings and then differing value patterns; recognizing and coping with mental health problems; law and the family; social pressures affecting adolescents (alcohol, drugs, etc.) pre-adolescent growth and development; adolescent growth and development; developmental differences of the sexes; adolescent-parent relations and communication; love, sex and dating behaviour. Fee \$20.00, 12 sessions.

231 Leadership and Married Life

Thursdays, 7:00 to 10:00 p.m.

This course will be offered in a third semester and will consist of: techniques of counselling; using community facilities; materials and resources; sound groupings and then differing value patterns; recognizing and coping with mental health problems; consideration of socio-economic

problems; law and the family; early years of marriage; factors which build a successful marriage; love and sex; effective management of conflict; communication in marriage; crises in marriage love and sex; effective management of income; preparing to become parents. Fee \$20.00, 12 sessions.

232 Leadership and Family Life

Thursdays, 7:00 to 10:00 p.m.

This course will be offered in a fourth semester and will consist of: techniques of counselling; using community facilities; materials and resources; communication; sound groupings and then differing value patterns; recognizing and coping with mental health problems; consideration of socio-economic problems; emotional adjustment to parenthood; crises in family life; developing solidarity and values; the family and the community; family dismemberment; the later years; role of male and female. Fee \$20.00, 12 sessions.

Rehabilitation and Welfare Counselling

A two year certificate program designed to (a) help those persons already engaged in Rehabilitation and Welfare Counselling and related occupations who are interested in improving their knowledge in these areas, and (b) acquaint the student with the main concepts which form the basis of dealing with the disadvantaged and their relationship to society. The course consists of two subjects per week, two and one-half hours per session, for a total of four semesters. The subjects covered are as follows:

233 Communications

- Creative Problem Solving and Decision 234 Making
- Social Welfare and Community 235 Resources
- 236 Vocational Guidance Maturation and its Relationship to Human **Problems** Interviewing and Counselling Techniques **Human Relations** Personality Assessment and Evaluation

The first four subjects may be taken in the first year and are outlined below:

233 Communications

Mondays, 7:00 to 9:30 p.m. Available in the fall of 1968, English Usage: (Grammar) The Programmed Instruction approach is preferred. Most work will be completed out of class on a continuing basis. Session time to be used for clarification or group discussion when necessary and for unit test checking. Report Writing: Informational; investigative; case history; and follow-up records. Correspondence: Letter writing skill; form letters; guide and pattern letters; medical, sociological and psychological nomenclature. The Spoken Word: Diction and speech;

effective listening (Xerox listening course.) Fee

234 Creative Problem Solving and **Decision Making**

Wednesdays, 7:00 to 9:30 p.m.

\$35.00.24 sessions.

Available in the fall of 1968. Psychological factors involved in creative problem solving and decision making. Overcoming blocks. Individual ideation. Free ideation technique. Skill developing exercises. Applying the technique to individual and

group effort on pre-defined problems. Definition preparation and analysis of problems. Practice application of total creative problem solving process to problems presented by participants. Incubation, synthesis, evaluation, and development, Decision making, Fee \$35.00, 24 sessions.

235 Social Welfare and Community Resources

Mondays, 7:00 to 9:30 p.m.

Available in the winter of 1969. Social Welfare: Philosophy and Development. Modern Concepts and Research, Methods and Techniques, Practice in Canada. Community Resources: Legislation. Practical Problems, Roles of Agencies, public and private. Fee \$35.00, 24 sessions.

236 Vocational Guidance

Wednesdays, 7:00 to 9:30 p.m.

Available in the winter of 1969. Selective Placement: Older worker, Mentally handicapped. Mentally retarded, Drug & Alcoholic Addicts. Ex-inmates, Penal Reform Institutes. Physically Handicapped.

Psychometric Testing, Physical Appraisal, Job Analysis, Fee \$35.00, 24 sessions.

Special Interest Courses

237 Discovering Religion

Wednesdays, 7:00 to 9:30 p.m.

An exploration of what man does and says about the events he experiences. This course will explore a variety of 'religious' myths and their manifestations in the events of everyday life. It is designed to create a participatory environment in which the deeper significance of these events can be explored creatively. It will utilize stimuli

from the communication media, educational and social disciplines. The course is directed to a broad segment of the community, including educators, clergymen, community leaders, youth leaders, parents. Sessions will be developed to enable the participants to identify religious manifestations in contemporary events. They will provide opportunity to explore the significance of myth, celebration and communication in everyday experiences. It is recommended that this course be taken in preparation for 238, Human Rights, which will be offered in the second semester. Fee \$20.00, 12 sessions.

238 Human Rights or The Right to be Human Thursdays, 7:00 to 9:30 p.m.

The course will provide an opportunity for the exploration of human values, attitudes and goals in life. It will emphasize 'the right to be free'. It is designed to lead participants to an awareness of social issues and concerns which could motivate intelligent social action. A philosophy of 'social animation' expresses the intent of the course. The course is directed to a broad segment of the community, including educators, clergymen, social workers, youth leaders, community leaders, persons in municipal government, parents. Six aspects of social concern will be explored: housing, employment, poverty, status of women, alienated youth, race. This course will be offered in the second semester, January 1969, and is a natural follow up of 237, Discovering Religion. Fee \$20.00, 12 sessions.

239 Human Relations Laboratory

Mondays, 7:00 to 9:30 p.m.

The course offers a learning experience in inter-

personal relationships focused in 'communication'. It is designed to assist participants to develop more effective skills in leadership, supervisory, administrative and counselling roles. Opportunities to experiment in new ways of communicating and in dealing with change as it affects the participants' vocational environment are an inherent part of the course. The course will be broken down into two semesters as follows: Communications I: For persons concerned with interpersonal relationships in their leadership roles in all forms of organization. Communications II: For persons who have participated in Communications I, or who have had previous human relations training. Fee \$35.00, 24 sessions.

240 Municipal Government

Tuesdays, 7:00 to 9:30 p.m.

Designed to increase the knowledge of citizens in municipal affairs. It will provide general knowledge for those who would serve on public bodies, either elected or appointed and encourage prospective high calibre candidates to serve their municipal governments in various capacities. Course will also be of special interest to landlords and tenants, teachers and housewives. The course will include: History of Local Government in Ontario; Forms and Structures of Local Gorvernment; Operation - Municipal Councils; Structure Municipal Government-Functions; The Provincial Government in Relation to Municipality: Commissions-Boards; Municipal Finance; Council Chamber Procedure: Mock Session of Council: Local Government — Its Improvement, Sponsored by the Association of Ontario Mayors and Reeves. Fee \$20.00, 12 sessions.

241 Mental Health

Wednesdays, 7:00 to 9:30 p.m.

The course is designed to assist persons in their understanding of basic needs, emotional development, motivation, and to increase their knowledge of how these contribute to positive social adjustment and interpersonal relationships. It will be focused in the developmental process covering the life span of the person. Implicit in this approach will be a study of the affect of environmental pressures, conflict and tension on mental health. It is expected that this course will be attractive to educators, supervisors, clergymen, doctors, lawyers, nurses, police, youth leaders and community leaders. This course is restricted to mature persons (as determined by the Admission Board) who desire to increase their knowledge of sound mental health principles in order to assist them in either their vocational environmental or their home environment. Fee \$35.00, 24 sessions.

242 Contemporary Canadian Political Life Thursdays, 7:00 to 10:00 p.m.

The course is designed to acquaint the student with the development, nature, and functioning of the political system of Canada. The topics discussed will include: What is politics? The State and Society. Political Agencies and Processes — The Party System, Public Opinion and Pressure Groups, The Structure of Government, Canadian Federalism. Fee \$35.00, 24 sessions.

243 American Politics

Mondays, 7:00 to 10:00 p.m.

To acquaint the student with the development, nature, and functioning of the political system of the United States. Fee \$35.00, 24 sessions.

244 Landscaping Your Home

Tuesdays, 7:00 to 10:00 p.m.

The course is designed to aid the home gardener in the design, development and maintenance of his home grounds.

Class discussion will involve the analyzing of individual home and garden problems. Topics include: Practical home landscaping, landscape development, growing plants for home use, grounds maintenance. Fee \$30.00, 20 sessions.

The student will learn to read more quickly and

245 Effective Speed Reading

Wednesdays, 7:00 to 10:00 p.m.

efficiently using modern methods. This course is designed to cope with the information explosion. The techniques and equipment employed are:— Tach X; increased perception and assimilation. — Controlled reader; a steady, gradual increase in reading rate, governed by individual comprehension. — Vocabulary; Personal vocabulary development through the use of modern program instruction methods. Fee \$20.00, 12 sessions.

246 Credit in Today's Society

Thursdays, 7:00 to 10:00 p.m.

In today's affluent society a knowledge of sound credit use is desirable. Specific issues will be studied in depth.

From this study of the use of credit, the student will benefit in the following areas: 1) Current credit legislation. 2) Credit ratings — establishment, importance, protection. 3) Computers and Credit — Communication problems. 4) Credit and Your Budget — Norms and Maximums. 5) Refinancing — Autos, 2nd mortgages, consolidation. 6) Advertising media — techniques. 7) Re-assigned

contracts — How they affect your guarantees. Fee \$20.00, 12 sessions.

247 Crime and Society

Mondays, 7:00 to 9:30 p.m.

A special interest course which discusses: Sociology of Crime (Interaction of social and cultural patterns, Deviant behaviour); Administration of correctional services and agencies; Juvenile Delinquency (An intensive study of the significance of this term in contemporary society.) Fee \$35.00, 24 sessions.

262 Descriptive Astronomy

Tuesdays, 7:00 to 9:30 p.m.

A descriptive course in astronomy which takes the form of lectures, discussions, films and field work where appropriate. Topics discussed are as follows: The Earth We Live In; The Sky Around Us; Our Understanding of the Heavens; The Moon, Our Nearest Neighbour; The Parent Sun; The Planets; The Stars as Suns; The Birth and Death of the Solar System; Our Galaxy, the Milky Way; Cosmology; Visit to the McLaughlin Planetarium; Visit to the David Dunlop Observatory. Fee \$20.00, 12 sessions.

Food Service Special Interest Courses

248 Practical Cooking For Homemakers Mondays, 7:00 to 9:30 p.m.

Cooking demonstrations, lectures, and student participation are designed to teach practical cooking based on traditional culinary arts. Concentration will be on soups, sauces, meat, poultry, seafood, salads, vegetables, and egg cookery, as well as various desserts. Basic methods of

cooking and their modifications, such as sauteing, broiling, roasting, poaching, boiling, braising, stewing, and deep frying, will be demonstrated. Fee \$35.00, 24 sessions.

249 Cake Decoration and Design

Mondays, 7:00 to 9:30 p.m.

This course includes the preparation of royal icing, fondants, butter creams, frosting, and decorating materials. Also studied will be methods of decoration, geometric and freehand designs, stencils, prefabricated decorations, lettering, flowers and border design. Fee \$35.00, 24 sessions.

250 Candy Makers

Thursdays, 7:00 to 9:30 p.m.

Special emphasis will be placed on methods and techniques in candy making. Demonstrations, lectures and student participation are designed to teach practical candy making, theory of candy making, and the selection of ingredients and utensils. The preparation of caramel, chocolate, crystal sugar, fudge, pulled sugar, coating candies, as well as colouring and flavouring of candies will be included. Fee \$35.00, 24 sessions.

251 Basic Course for Maitre d'Hotel

Mondays, 7:00 to 9:30 p.m.

The course includes the technique and methods of Side Table Cookery in the Dining Room and Advanced Dining Room Service. This includes dining room equipment and lay-out, the use of wines, liqueurs and spirits, dishes prepared at the table, carving at the table, flambe dishes, salad preparation, side-table coffee and liqueur service, theory of dining room operations, gueridon and lamp cookery. Fee \$35.00, 24 sessions.

252 Retail Meat Cutting

Wednesdays, 7:00 to 9:30 p.m.

This course is designed for persons engaged in the retail meat trade and persons interested in learning the skill of meat cutting. It involves the grading and characteristics of beef, pork, lamb, and veal carcasses and cutting of carcasses. Preparation of poultry, fish and shellfish for retail sale, preparation and use of innards (offal), displaying and merchandising of all types of meat products will also be covered. Fee \$35.00, 24 sessions.

253 Teaching Techniques: Theory and Methods of Practical Food Demonstrations

Fridays, 7:00 to 9:30 p.m.

This course is designed for the educator whose responsibility is to plan and conduct food demonstrations. Topics to be discussed are as follows: Concepts and techniques for equipment design; food laboratory layout; professional tools; recipe writing; ordering and receiving food; pricing; theory of food demonstrations; developing lesson plan; visual aids; sanitation and hygiene; safety; uses of wine, spirits, herbs and spices. The preparation of seafood, fish, meat, poultry, game, vegetables, salads, desserts, is also included. Fee \$35.00, 24 sessions.

Credit Subjects

400 Introduction to Accounting

Tuesdays and Thursdays, 7:00 to 9:30 p.m. This course introduces accounting procedures covering the accounting cycle including journals, posting, accounts, working papers and financial statements. Included in the cycle are the study of adjustments required for accurate statement presentation and the principles of disclosure and correct presentation for financial statements. Special journals and subsidiary ledgers are introduced, as are accounting procedures that pertain to single proprietorships, partnerships and limited companies. The types of assets and liabilities in a business organization are studied in detail as to their source, accounting for same and their evaluation, Fee \$50,00, 48 sessions.

401 Business Law

Tuesdays, 7:00 to 9:30 p.m.

This course covers the judicial system: elements of contract law; forms of business organization with specific reference to partnerships and corporations; bankruptcy; the law of agency and employment; elements of landlord and tenant, mortgage and real estate law. It is not intended to train one to be a lawyer, but rather for one to have an appreciation for the law as it relates to business. Fee \$35.00, 24 sessions.

402 Introduction To Data Processing

Mondays, 7:00 to 10:00 p.m.

The purpose of this course is to provide a thorough understanding of automatic data processing methods and devices. You will be expected to gain a basic knowledge of the capabilities and applications of manual, electromechanical and electronic devices. In addition, through the use of practical business problems you will be required to write, test and correct programs in at least one high level language. Fee \$35.00, 24 sessions.

Introduction to Business 403

Wednesdays, 7:00 to 10:00 p.m.

This survey course will acquaint students with fundamental concepts of Canadian business. The course is divided into six sections, including Organization of Business, Personnel, Production, Finance, and Marketing. Current topics are included to allow a free expression of opinion which will stimulate individual participation. Case studies and interviews are used extensively to develop awareness insights and understanding of business management. Fee \$35.00, 24 sessions.

404 **Accounting Systems**

Wednesdays, 7:00 to 10:00 p.m.

The accounting systems course is designed to prepare you to cope with problems arising out of communication data in business. A study will be made of the use of manual, mechanical and automated equipment in processing data through an office system. Practice in systems design will be an integral part of the course. Fee \$35.00, 24 sessions.

405 Introductory Shorthand

Tuesdays and Thursdays, 7:00 to 10:00 p.m. Development of a sound knowledge of the theory of Pitman Shorthand and the ability to take shorthand dictation at speeds from 60 to 80 w.p.m. Fee \$50.00, 48 sessions.

406 Beginning Typewriting

Mondays and Wednesdays, 7:00 to 9:00 p.m. A thorough course in the operation of typewriters and mastery of the touch system. The development of skill and the production of letters of various styles, centering and tabulation exercises of reasonable difficulty. Fee \$50.00, 48 sessions.

407 Introduction To Marketing

Mondays. 7:00 to 10:00 p.m.

The purpose of this course is to provide you with sufficient knowledge of the marketing function so that you will have an understanding of its role and performance within the economy and the individual firm. Using an approach which is highly consumer-oriented, the course will examine various ingredients of a marketing program, including product, pricing, packaging, distribution, advertising, sales promotion and personal selling. A combination of lectures, classroom discussion of specific case problems and special projects will be employed. Fee \$35.00, 24 sessions.

408 Medical Shorthand

Tuesdays and Thursdays, 7:00 to 10:00 p.m. The development of speed and facility in writing and transcribing medical shorthand dictation. with introduction of specialized medical terminology commonly used in hospitals, and general or specialized medical practice. Production of usable transcripts at advanced rates with emphasis on professional competence. Fee \$50.00, 48 sessions.

409 Medical Office Practice I

Mondays, 7:00 to 10:00 p.m.

Training of the secretarial student in the business procedures used in hospitals and medical offices.

Emphasis will be placed on meeting and handling patients; processing medical records and forms managing the medical office: medical office routines. Fees \$35.00, 24 sessions.

410 Medical Science

Tuesdays and Thursdays, 7:00 to 9:30 p.m. The medical secretary is given a grounding in general chemistry before proceeding with anatomy and physiology so that he or she may become generally familiar with medical science and so become a more efficient medical secretary. The topics to be studied include the following: cells, tissues, organs, systems, types of joints, muscular system, nervous system, circulatory system, endocrine system, excretory system, the respiratory system, the digestive system, and the reproductive system. Fee \$50.00, 48 sessions.

Legal Office Practice I 411

Tuesdays and Thursdays, 7:00 to 9:30 p.m. Advanced speed and accuracy building in the operation of various electric typewriters, with emphasis on preparing legal documents, instruments and forms of correspondence; filing. reference and resource sources; travel arrangements, communication services; specialized procedures in real estate, court, estate and company practice; legal ethics and protocol. Fee \$50.00, 48 sessions.

412 Legal Shorthand

Tuesdays and Thursdays, 7:00 to 9:30 p.m. The development of speed and facility in writing and transcribing legal shorthand dictation, with particular emphasis on legal terminology in the main areas of law, together with a wide general business vocabulary. Introduction to advanced

theory, phrasing and short forms; advanced speed building at rates of 120 w.p.m. and higher. Production of mailable transcripts with emphasis on professional competence. Fee \$50.00, 48 sessions.

Certificate Programs

Effective Supervision - Production

A two year certificate program in effective supervision designed to prepare persons in production for advancement and to improve the skills and effectiveness of line supervisors. Applicants must have grade 12 or equivalent experience based on mature student counselling. The course is based on the principles of good management and consists of the following subjects offered in consecutive semesters:

- 413 Effective Supervision Production
- 415 Human Relations
- 416 Communications
- 417 Labour Relations

Effective Supervision — Administration

A two year certificate program in effective supervision directed at office staff and administrators wishing to prepare for advancement or improve their skills and effectiveness on the job. Applicants must have grade 12 or equivalent experience based on mature student counselling. A certificate is issued to students successfully completing the following subjects:

- 414 Effective Supervision Administration
- 415 Human Relations
- 416 Communications
- 417 Labour Relations

413 Effective Supervision — Production Mondays, 7:00 to 9:00 p.m.

Designed to assist the Supervisor and Foreman in increasing production with specific objectives of identifying the supervisor's function, reducing waste of human, material and financial resources, reducing basic work and material content and improving the motivational climate of the organization. Includes the role of the Supervisor; principles of effective supervision; taking proper action; motivation of the worker; setting objectives and goals; planning; scheduling, measuring results and evaluating efficiency; improvements; getting a day's work done. Fee \$30.00, 10 sessions.

414 Effective Supervision — Administration Wednesdays, 7:00 to 9:00 p.m.

Designed for supervisors in administrative, office, clerical, professional, technical, financial and commercial fields. It will be beneficial to those in both profit-oriented and service industries, in government organizations, in small, medium or large enterprises. The sessions include: The Role of the Supervisor; Principles of Effective Supervision; Analyzing the Problem; Setting Objectives and Goals; Organizing and Planning; The Human Factor; Flow of Information; Improvements; Evaluating Operations and Controlling Activities; Managing High Talented Personnel. Fee \$30.00, 10 sessions.

415 Human Relations

Mondays, 7:00 to 9:00 p.m.

The objective of this course is to help the supervisor to deal effectively with his problems in the area of personnel management. Using the case method, the student in effect learns "by doing",

and studies Human Relations in accordance with modern management concepts. The cases include a cross-section of incidents in various business. concerns; hence they learn to deal with problems in different settings. The basic theme of the course is that for profit maximization, all persons working in a business must work as a team.

Fee \$30.00, 10 sessions.

416 Communications

Mondays, 7:00 to 9:00 p.m.

To be offered in the second year. The course has been designed to make the supervisor aware of what communications are all about. It is recognized that a basic need of all managers is that they be able to communicate. The ten sessions are: Communication — its meaning and definition: Communication — problems through several levels; Communication — additional problems; Communication is a two-way street; Let's learn to listen: Barriers to Communication: Verbal communication — rules of what and how: The written communication: Communication through practice: Communication through conversation. Fee \$30.00. 10 sessions.

417 Labour Relations

Mondays, 7:00 to 9:00 p.m.

To be offered in the second year. This course is designed to help the Supervisor and Foreman deal effectively with aspects of labour relations, both where collective agreements have already been established and where certification may become possible. The student will study this very important subject by working through a series of "case studies", each case specializing in a particular problem. Various businesses are considered, in

order that the class gain experience in a variety of settings. Fee \$30.00, 10 sessions.

Electronic Data Processing

A two year certificate program designed to mee. the growing need for computer operators and junior programmers. As more and more companies, government departments and other organizations install computers, greater stress is placed upon the supply of trained technicians. Graduates should be able to relieve this strain and to benefit from the demand for their services. Growth opportunities with Data Processing departments are available as long as the students continue to develop. Thus the graduate must be prepared to continue his studies immediately upon completion of the course.

Admission Requirements: To qualify for admission applicants must satisfy the following requirements: (a) Grade 12 or equivalent, (b) two years' industrial experience, (c) successful completion of aptitude counselling. In order to qualify for the Certificate, applicants must successfully complete the following courses of study:

Semester I: Introduction to Data Processing 418 Semester II: Applied Electronic Data Processing 419 Semester III: Advanced Electronic Data Processing 420 Semester IV: Advanced Applications and Languages 421

418 Introduction To Data Processing Thursdays, 7:00 to 9:30 p.m.

A survey course of automatic data processing in industry and business. In addition to theory, the following topics are included: computer fundamentals, numbering systems, flowcharting, and coding in a major high level computer language. Laboratory sessions include keypunching and computer operation. Students will solve numerous problems on the computer which will be made available to him on a priority basis. Fee \$25.00, 12 sessions.

419 Applied Electronic Data Processing

Thursdays, 7:00 to 9:30 p.m.

This course, concentrating on the typical computer applications as found in industry, will be offered in the second semester commencing in January, 1969. Much of the time will be spent in the computer laboratory. Individual and/or group assignments to study the implementation of operating systems to simulate as closely as possible a Computer Centre operation in business or industry. Fee \$25.00, 12 sessions.

420 Advanced Electronic Data Processing

Thursdays, 7:00 to 9:30 p.m.

This one-semester course offered in the second year concentrates on theory. Topics covered: advanced high-level computer languages, assembler language, programming techniques and library or outside research on selected topics. It will be stressed that students are expected to be original, accurate and on their own as much as possible. The D.P. specialists will be required to assist in the closed-shop operation of the Computer Centre as part of their training as computer operators and programmers. Fee \$25 00, 12 sessions.

Advanced Applications and Languages Thursdays, 7:00 to 9:30 p.m.

The languages studied in this course will enable the student to handle sophisticated problems in Data Processing and will be chosen from COBOL, RPG, PLI, and basic Assembler. To be offered in the second year. Fee \$25.00, 12 sessions.

Marketing Management

A two year certificate program designed to prepare persons presently employed in industry for junior and intermediate management positions in Marketing. The first year deals largely with the roles and responsibilities of the Marketing Manager and Sales Manager, advertising, sales promotion and market research — all in the context of the overall marketing effort. During the second year, the students will be exposed to Marketing planning, new product development, product management, physical distribution, sales manpower development and sales office management. Case studies, seminars, films, slides, and practical exercises will be used extensively during the course.

First Year: Introduction to Marketing Management 422 Second Year: Marketing Management 423

Introduction To Marketing Management 422 Mondays, 7:00 to 9:30 p.m.

An introduction to marketing management with primary emphasis upon the following: The Marketing Concept; Organization for Marketing; The Role and Function of the Marketing Manager; The Role and Function of the Sales Manager; The Role and

Function of Marketing Services including advertising, sales promotion and marketing research. Admission Requirements: Grade 12 or equivalent plus a minimum of two years' industrial experience. Fee \$60.00, 24 sessions.

423 Marketing Management

Mondays, 7:00 to 9:30 p.m.

Within the framework of the previous year, the following additional subjects will be dealt with from the point of view of the Marketing Manager: Market Planning, New Product Development, Product Management, Physical Distribution, Sales Manpower Development, Sales Office Management. Fee \$60.00, 24 sessions.

Industrial Engineering

Saturdays, 9:30 a.m. to 12:00 Noon A three year certificate program covering the application of industrial engineering fundamentals in industry is offered in cooperation with the American Institute of Industrial Engineers. Topics covered will include operation analysis, flowcharting, plant layout, work methods, work measurement, training and operations research. The course will have a practical orientation and will be conducted on a lecture and discussion basis with an opportunity for application of the techniques learned where possible. A certificate will be awarded to all students successfully completing the following three year course of study:

First Year:

424 Introduction to Industrial Engineering

425 Work Simplification Second Year:

426 Work Measurement

Program Techniques and Network 427 Analysis

Third Year:

Training and Job Evaluation 428

Managing the Industrial Engineering 429 Program

Fee \$50.00 per year, 24 sessions.

Certified General Accountants Course

This evening course is provided through the Certified General Accountants Association in conjunction with Humber College, Graduates of this five year program are equipped with accounting management skills that enable them to meet the changing demands of the competitive business world. The program is designed primarily for the young man or woman who wishes to commence, or has already commenced, to work in an accounting department. Thus, his increasing knowledge and competence should help him advance in his employment and, at the end of five years, it will earn for him the right to use the initials C.G.A. after his name. The first year subjects are offered at Humber commencing in the fall of 1968. If warranted by the number of registrants, two classes will be organized each evening to provide a choice of starting times. For information regarding eligibility and registrations write to: The Registrar, The Certified General Accountants Association of Ontario, 25 Adelaide St. E. Toronto 1, Ontario.

First Year Subjects

430 Accounting

Managerial Statistics 431

432 Mathematics of Finance

430 Accounting

Mondays, 7:00 to 8:30 p.m. and 8:30 to 10:00 p.m. Principles of Accounting — Fundamental practices in accounting for service, merchandising and manufacturing enterprises under single partnership and corporate forms of proprietorship (14 sessions).

431 Managerial Statistics

Mondays, 7:00 to 8:30 p.m. and 8:30 to 10:00 p.m. The value of statistical techniques; measures of central tendency and dispersion; sampling; correlation analysis; the use of index numbers and ratios: statistical inference and the problems of interpretation. (6 sessions).

432 Mathematics of Finance

Mondays, 7:00 to 8:30 p.m. and 8:30 to 10:00 p.m. Study and application of the principles of mathematics of finance including simple interest and discount, compound interest, dated value, equivalence of sets of dated values, simple ordinary annuities, annuities due and deferred annuities, bonds, depreciation and depletion. (9 sessions).

Tutorial Classes for Certified Professional Secretaries' Examinations

The Humber College of Applied Arts and Technology offers assistance through tutorial classes to those secretaries preparing themselves for the Certified Professional Secretaries' examnation. These classes will cover all six subjects needed in order to successfully complete the examination administered by the Institute for Certifying Secretaries. The subjects will be ered at a rate of two subjects per year over a

period of 3 years. Business Administration and Secretarial Accounting will be offered in 1968-69.

- 433 Business Administration
- Secretarial Accounting 434
- 435 Business Law
- 436 Personal Adjustment and Human Relations
- Secretarial Skills 437
- 438 Secretarial Procedures

433 Business Administration

Mondays, 7:00 to 9:00 p.m.

This course will cover fundamental economic concepts found in the secretary's day-to-day contacts with prices, taxes, labour, social responsibilities of business; government regulations of business; sources of economic data; business organization and management; types of ownership; staffing a business; management controls; and techniques of office supervision and management. Fee \$20.00, 12 sessions.

434 Secretarial Accounting

Mondays, 7:00 to 9:00 p.m.

Classification of accounts; interpretation of accounting data and of financial records as related to top-level secretarial work, employer's personal record keeping, payroll, petty cash, income tax reports, budgets, and notes. Fee \$20.00, 12 sessions.

435 Business Law

Mondays, 7:00 to 9:00 p.m.

Knowledge of the principles of law involved in the secretary's daily work, including contracts and bailments, the law of agency and sales, insurance, negotiable instruments, and real property. Fee \$20.00, 12 sessions.

436 **Personal Adjustment and Human Relations**

Mondays, 7:00 to 9:00 p.m.

Problems requiring the exercise of judgement by the secretary in dealing with actual office situations involving superiors, colleagues, and subordinates. Fee \$20.00, 12 sessions.

437 Secretarial Skills

Mondays, 7:00 to 9:00 p.m.

A series of items, including transcription of verbatim and office-style dictation, composition, and typing of common business papers; the detection and correction of errors involving capitalization, grammar, punctuation, spelling, and the expression of numbers. Fee \$20.00, 12 sessions.

438 Secretarial Procedures

Mondays, 7:00 to 9:00 p.m.

Knowledge of modern methods of handling mail. filing, travel and itineraries, and communications media; the selection and procurement of supplies and office equipment; duplicating processes; and use of the library and standard reference. Fee \$20.00, 12 sessions.

Special Interest Courses

439 Electronic Data Processing for Executives Tuesdays, 7:00 to 9:30 p.m.

This course is designed to provide middle and senior management a full appreciation of Electronic Data Processing. Both lecture and work shop teaching will be used, with participation in case study examples. Course includes: Information Flow, Organization, Hardware and Software, Economics, Fee \$25.00, 12 sessions.

440 Computer Languages Workshop

Wednesdays, 7:00 to 9:30 p.m.

This is a non-credit course directed toward persons currently engaged as programmers who either wish to learn new languages or to advance their knowledge of the language they are currently using. Practical business applications will be used by the students in writing, testing and debugging programs. The languages to be used are: P.L.I. Cobol, R.P.G. and Assembler. A System 360, model 30 computer will be available for direct use in the workshop. Fee \$25.00, 12 sessions.

441 Law: Protection of the Individual

Mondays, 7:00 to 9:00 p.m.

This course is designed to provide the individual with a basic knowledge of the law and the manner in which it operates in practice, to provide an awareness of potential problems and to aid in preventing liability both criminal and civil. Fee \$20.00, 12 sessions.

442 Principles and Practices of Investment Finance

Wednesdays, 7:00 to 9:30 p.m.

The course is designed to (a) start those in attendance on the way to making independent decisions regarding their own personal investment program, (b) point out the dangers and pitfalls that confront the investor, and (c) show how investing wisely can prove to be profitable and challenging as a sparetime activity. Fee \$35.00, 24 sessions.

443 Forkner Shorthand

Wednesdays, 7:00 to 10:00 p.m.

Forkner shorthand is a scientific combination of longhand letters and a few symbols to form a system of rapid writing. It has been specially

designed to cut down the number of hours required to learn the better known symbol methods of shorthand. Many students find these systems difficult to master, and even more difficult to retain without constant use. Forkner shorthand enables an average student to reach a speed of 100 w.p.m. in about 80 hours of tuition, and because it is based mainly on the letters of the alphabet memory retention is much greater. Transcription of notes is rapid and accurate because of the similarity of many of the outlines with the written longhand words. Fee \$35.00, 24 sessions.

444 Industrial Psychology

Wednesdays, 7:00 to 9:00 p.m.

The course will develop an emphasis on the organizational and social environment of industry through a study of case problems; developing a human relations climate, individual motivation and behaviour; the leadership function; effective supervision of employees; human relations training; staff relationships and group dynamics; work and procedures design; counselling and interviewing; communications and group processes; Psychology and philosophy of employee-employer and union-management relations; operating activities such as wage administration, job evaluation; applying wage incentives; work systems; automation; retraining employers and employees, etc. case problems. Fee \$35.00, 24 sessions.

445 Business Decision Laboratory

Mondays. 7 00 to 9:30 p.m.

This business laboratory is intended to promote management and business administration skills. The purpose is to provide the participants with

management experience in an environment corresponding to that of a company. The simulated environment consists of any number of laboratory companies up to nine, all strenuously competing for their share of the market. The participants act as managers of a company and make decisions involving the administration of funds and the selection of strategies appropriate for competitive circumstances. The simulated business environment reacts to these decisions and the results are presented to the participants for repetitive decisions. The Business Decision laboratory is designed for Executives, Middle Management, Business Consultants and University and College Lecturers. Fee \$35.00, 12 sessions.

446 Checker Education Program

Tuesdays and Thursdays, 7:00 to 9:30 p.m. Humber College of Applied Arts and Technology in cooperation with Dominion Stores Limited. Power Super Markets Limited, Steinberg's Limited (Ontario Division), The Great Atlantic and Pacific Tea Company Limited and The Oshawa Wholesale Limited, is developing an 80 hour Checker Training Program. It is aimed at satisfying a serious need for trained personnel to fill the growth requirements of the Supermarket Industry, Details of this course are available on request. Special Note: This course will be held at the Queensway Campus. Fee \$50.00, 32 sessions.

Through its Creative Art Division, Humber College will serve the communities of Ftobicoke and York with a variety of programs in the fine arts and arts and crafts field. We cater to those already working in a field related to art and/or design who would like to acquire new skills or upgrade their abilities. Our programs in the Continuing Education Division are generally taught by staff members who are regular day instructors. The standards for both day and evening are equally exact. In most courses we expect recent practice in sketching and drawing. Samples of work or a portfolio will help our instructors in planning a suitable program of study for you. Although most of the courses in this Division are at a professional level it does not rule out the interested amateur who is striving for good skills and contemporary Canadian design. So to both the interested amateur and professional, we extend an equally sincere welcome. Share with us the experience of mastering technical processes and the fulfillment of imaginative expression. Our programs are all in the area of special interest and do not provide credits for our full time 2 or 3 year diploma and certificate programs.

600 Art Appreciation

Tuesdays, 7:00 to 9:30 p.m.

A course designed to increase the student's ability to understand and evaluate those art forms which are an integral part of his or her daily life. Presentation is in the form of lectures and seminars, well-illustrated with slides, motion pictures and other audio visual aids. Survey of architecture, sculpture and painting, furniture, glass, ceramics, metalwork and appliances. Fee \$20.00, 12 sessions.

601 Ceramics

Tuesdays, 7:00 to 10:00 p.m.

The course will cover fundamentals of the use and preparation of clay, hand-formed and wheel-thrown pottery, introduction to moldmaking, firing and glazing, creative problems and decorative techniques, application and chemistry of glazes and stacking and firing of kilns.

Fee \$35.00, 24 sessions.

602 Creative Photography

Tuesdays, 7:00 to 10:00 p.m.

The course will cover the fundamentals of photography, its history and the aesthetics involved, with an introduction to the basic methods of camera operation. Lighting exposure, darkroom techniques, printing and enlarging are fully dealt with. Assignments and projects in illustrative photography will be evaluated by the instructor and the group as a whole. Fee \$35.00, 24 sessions.

603 Design

Tuesdays, 7:00 to 10:00 p.m.

An introduction to the fundamental aspects of design with emphasis on development of imaginative awareness and conceptual skill. Design elements and principles of organization are studied together with manipulation of materials and theory of colour. Elements of calligraphy and letter forms are used as source material for experimental problems and design principles. Correlation of graphic symbols with specific meanings. Study of perception with manual and photographic techniques. Problems of design as related to architectural and spatial concepts. Development through plans, elevations and scale

models. Visual expression of themes and concepts in the context of contemporary practice. Fee \$35.00, 24 sessions.

604 History of Art

Tuesdays, 7:00 to 9:30 p.m.

A survey of the basic problems in the cultural development of architecture, sculpture, painting and other art forms with an introduction to the basic terminology of the arts and the language of stylistic criticism. Emphasis is on visual presentation particularly in the areas of Painting and Sculpture of the 19th and 20th Century, North American Art, German Art, British Art, French Art, Art in Italy and Art in the Low Lands. Fee \$20.00, 12 sessions.

605 Illustration

Mondays, 7:00 to 10:00 p.m.

A program which provides training to those who are interested in visual communication such as used in books, magazines, catalogues and other publications, as well as in television and advertising illustration. Drawing and painting are the core of this program so as to prepare the student to record and dramatize illustrations with the printed text. Fee \$35,00, 24 sessions.

606 Interior Design

Mondays, 7:00 to 10:00 p.m.

The course is designed to develop drafting and drawing skills. The physical and emotional needs of man will be considered. The program evaluates the space in which man resides, works and entertains and surveys furniture and product design, its construction; fabric design and technology; lighting and communication systems, and other environmental problems. Fee \$35.00, 24 sessions.

607 Metal Arts

Tuesdays, 7:00 to 10:00 p.m.

Among the topics to be covered will be: fundamentals of metalsmithing techniques in nonferrous and precision metals, introduction to tools and equipment, basic jewellery techniques such as piercing, filing, soldering and polishing, use of materials in aesthetic and functional relationships, survey of surface treatments of silver and gold. raising and forging, of small silver objects. Fee \$35.00, 24 sessions.

608 Modern Dance

Tuesdays, 7:00 to 10:00 p.m.

Participants will study and practise exercises to develop body awareness, flexibility, co-ordination and general fitness. Poise and confidence will be developed through an experience of appropriate movements and gestures. Emphasis will be placed on rhythm, design, dynamics and emotional gestures. Interesting studies, group and solo, will be developed by the individual, to lead to finished dances. Fee \$35.00, 24 sessions.

609 Music Appreciation

Tuesdays, 7:00 to 9:30 p.m.

An introduction to the basic principles of music and musicianship. Intelligent appreciation of various compositions will be encouraged through guided listening to masterpieces on recordings and through attendance at concerts. Fee \$20.00, 12 sessions,

610 Painting

Tuesdays, 7:00 to 10:00 p.m.

An introduction to painting in oil and acrylics with work from the figure, still-life, landscape, and problems of imaginative perception. A survey of

the basic materials of the painter such as supports, grounds, pigments, vehicles and binders will be included. Students will work from still-life and landscape as well as imaginative composition, both in transparent watercolour and gouache. Figure drawing will be taught with emphasis on the fundamental muscular and skeletal structure of the human body. Drawing will be devoted to all aspects with emphasis on disciplined draftmanship and imaginative composition. An introduction will be made to a variety of print techniques such as relief processes, silk screen, intaglio and lithography. Fee \$35.00, 24 sessions.

611 Sculpture

Mondays, 7:00 to 10:00 p.m.

The course will cover modeling of anatomical structures and concepts of sculptural form in clay, casting and direct work in plaster, sculpture in the ceramic medium and use of glazes and textural treatment for surface enrichment, sculpture in iron, brass and copper with the use of techniques such as brazing and metal welding and an introduction to metalsmithing. Fee \$35.00. 24 sessions.

612 Weaving and Fabric Design

Mondays, 7:00 to 10:00 p.m.

An introduction to fabric design, yarn calculation and basic weaving, which will include a survey of problems, equipment and materials. Sample warps of fabrics for use as drapery, upholstery, dresses and suits will be designed and woven. The course will explore decorative techniques such as batik, tie-die, stencil, block-print and silk screen. Fee \$35.00, 24 sessions.

613 Wood Design

Tuesdays, 7:00 to 10:00 p.m.

An introduction to the hand and machine woodworking tools including fundamental techniques of wood fabrication such as basic joinery, turning, veneering and finishing. The sources, qualities and kinds of wood will be surveyed. Design and development of furniture, craftsmanship and professional standards will be covered Fee \$35.00, 24 sessions.

711

703

Engineering Technology Programs

Ontario Association of Certified Engineering Technicians and Technologists

All students desiring credit and certification from A.P.E.O. should make application to the Ontario Association of Certified Engineering Technicians and Technologists, 236 Avenue Road, Toronto 5, Ontario, to ensure acceptance of the student's academic background and for rulings on the acceptance of equivalent subjects. Students should obtain all rulings in writing. Certification in these programs will be by the Ontario Association of Certified Engineering Technicians and Technologists.

Requirements for Admission: The minimum entrance requirement for these courses is the Ontario Secondary School Graduation Diploma obtained after successful completion of any Grade 12 (Ontario) course, provided the applicant has passed the Mathematics and Science subjects of Grades 11 and 12, or has the equivalent standing from other provinces or countries. Applicants over 22 years of age may be admitted provided they have passed English, Mathematics and Science subjects of Grades 11 and 12, or have the approval of the Admission Board.

OACETT Mechanical Engineering Technician Course

(Nine Subjects)

ACADEMIC REQUIREMENTS FOR CERTIFICATION
Business Communications (English 1) 711
Mathematics 1 703
Mathematics 11 704
Mechanics 1 or Physics 1 721 or 701

Plus any five of the following subjects:	
Electrical Fundamentals	714
General Chemistry	700
Mathematics 111	705
Mechanics 11	722
Metallurgy	709
Technical Drawing	725
Theory of Machines	726
Thermodynamics	708
NOTE: Both Physics 1 and Mechanics 1	may be
taken as two of the required nine s	ubjects.
OACETT Civil Engineering Technician C	ourse
(Nine Subjects)	
ACADEMIC REQUIREMENTS FOR CERTIFICATION	
Business Communications (English 1)	711
Mathematics 1	703
Mathematics 11	704
Mechanics 1 or Physics 1	721
	or 701
Plus any five of the following subjects:	
Electrical Fundamentals	714
General Chemistry	700
Mathematics 111	705
Mechanics of Materials 1	723
Surveying	724
Technical Drawing (Civil)	728
Theory of Simple Structures	
Note: Both Physics 1 and Mechanics 1	may be
taken as two of the required nine si	ubjects.
OACETT Electrical Engineering	
Technician Course	
(Nine Subjects)	

ACADEMIC REQUIREMENTS FOR CERTIFICATION

Business Communications (English 1)

Mathematics 1

Mathematics 11	704	Mathematics 1
Physics 1	701	Mathematics 11
Plus any five of the following subjects:		Mechanics 1
Alternating Current Circuits	710	Physics 1
Electrical Fundamentals	714	Technical Drawing
Electronic Circuits	716	SUBJECTS OFFERED BY HUMBER COLLEGE IN
Electronic Fundamentals	717	Business Communications (English 1)
General Chemistry	700	Mathematics 1
Mathematics 111	705	Mechanics 1
Technical Drawing	725	

Advanced Technical Evening Classes:

Students should consult the Registrar regarding acceptance of the student's academic background and for rulings on the acceptance of equivalent subjects.

Requirements for Admission: The minimum entrance requirement is the Ontario Secondary School Graduation Diploma obtained after successful completion of any Grade 12 (Ontario) course, provided the applicant has passed the Mathematics and Science subjects of Grades 11 and 12, or has equivalent standing from other provinces or countries. Applicants over 22 years of age may be admitted provided they have passed English, Mathematics and Science subjects of Grades 11 and 12, or have the approval of the Admission Board.

ATEC Grade 1 Certificate Course

(Nine Subjects)

ACADEMIC REQUIREMENTS FOR CERTIFICATION

Business Communications (English 1) 711

Electrical Fundamentals 717

Electronic Fundamentals 717

General Chemistry 700

Association of Survey Technicians of Ontarlo

All students desiring credit and certification from O.L.S. courses should make application to the Association of Survey Technicians of Ontario. Box 154, Downsview, Ontario, to ensure acceptance of the student's academic background and for rulings on the acceptance of equivalent subjects. Students should obtain all rulings in writing. Certification in these programs will be by the Association of Survey Technicians of Ontario. Requirements for Admission: The minimum entrance requirement is the Ontario Secondary School Graduation Diploma obtained after successful completion of any Grade 12 (Ontario) course, provided the applicant has passed the Mathematics and Science subjects of Grades 11 and 12, or has the equivalent standing from other provinces or countries. Applicants over 22 years of age may be admitted provided they have passed English, Mathematics and Science subjects of Grades 11 and 12, or have approval of the Admission Board.

O.L.S. Survey Technician Course (Nine Subjects)		Mechanical Technology Certificate Program (Six Subjects)	n
ACADEMIC REQUIREMENTS FOR CERTIFICATION		REQUIREMENTS FOR A CERTIFICATE	
Business Communications (English 1)	711	Business Communications (English 1)	711
Mathematics 1	703	Mathematics 1	703
Mathematics 11	704	Physics 1	701
Physics 1	701	Plus any three of the following subjects:	
Plusany five of the following subjects:		General Chemistry	700
Advanced Plane Surveying	731	Mathematics 11	704
Computer Programming (Science & Eng.)	712	Mechanics 1	721
Control and Electronic Surveying	733	Mechanics 11	722
Legal Surveying	734	Metallurgy	709
Mathematics 111	705	Technical Drawing	725
Photogrammetry	735	Theory of Machines	726
Plane Surveying	736		
acceptance of the student's academic back- ground and for rulings on the acceptance of equivalent subjects. Requirements for Admission: The minimum entrance requirement is the Ontario Seconds School Graduation Diptoma obtained after s cassful completion of any Grade 12 (Ontario course, provided the applicant has passed to Mathematics and Science subjects of Grade and 12, or has the equivalent standing from provinces or second.	ary uc-)) he	Business Communications (English 1) Mathematics 1 Physics 1 Plus any three of the following subjects: Highway Technology Mathematics 11 Mathematics 111 Mechanics 1 Surveying	703 701 719 704 705 721 724 725
of age may be admitted provided they have passed English, Mathematics and Science species of Grades 11 and 12, or have approval the Admission Board.	'ears	Technical Drawing Electrical Technology Certificate Program	

Plus any three of the following subjects:	
Alternating Current Circuits	710
Electrical Equipment	71:
Electrical Fundamentals	71
Electrical Measurements	71
Electronic Fundamentals	71
Mathematics 11	70

Subject Detail for Engineering Technology Programs:

700 Chemistry (General)

Mondays, 7:00 - 9:30 p.m.

Physical and chemical changes, simple equations and the quantitative relationships implied by chemical reactions. Chemical properties of hydrocarbons with special reference to petroleum. Nomenclature (Geneva System) and recognition of the functional groups of the common homologous series: Nuclear chemistry, radio-activity, half-life and importance of radio isotopes, fission and fusion. Atomic structure, energy levels of electrons, s and p orbitals, shapes of simple molecules such as water, methane and ammonia and the explanation by the hybridization theory and the valence shell electron pair repulsion theory. The Periodic Table. Solids, liquids and gases. Atomic, ionic, metallic and molecular bonds, Kinetic theory of gases, Gas laws and calculations of molecular weights. Rate of reaction and equilibrium. LeChatelier's principle, calculations based on equilibrium constants, solutions, solubility product constants illustrated by simple anion and cation analysis equations. Molarity and normality. Acids and bases, pH, dissociation constants, salt hydrolysis. Redox reactions, electron transfer oxidation state.

Oxidation half reactions and potentials, electro chemical series, electrolysis, galvanic cells, Faraday's Law, galvanic corrosion and methods of prevention. Water, cause of hardness, chemical and ion exchange methods of softening. Methods of reporting hardness. Metallurgy extraction and refining of aluminum, copper, nickel and iron. Prerequisite: Grade XII Chemistry. Fee \$35.00, 24 Sessions.

701 Physics I

Wednesdays, 7:00 to 9:30 p.m.

Principles of measurement; Newton's Laws of Motion and applications to machines; gravitational forces and satellite applications; momentum and collisions; simple harmonic motion and applications; fluid flow dynamics and measurement; properties of materials; experimental confirmation of phenomena and principles. Temperature and thermal effects and measuring devices; calorimetry and heat transfer elementary kinetic theory and thermodynamics applied to heat engines. Wave and vibrational analysis and sound; illumination and applications; reflection; and polarization of light and optical devices; diffraction. dispersion and atomic spectra and applications; atomic physics; experimental confirmation of physical phenomena and principles. Prerequisite: Mathematics I, Equivalent Subject: Grade XIII Physics. Fee \$35.00, 24 sessions.

703 Mathematics I

Mondays, 7:00 to 9:30 p.m.

Approximate numbers; slide-rule and mathematical tables; operations involving physical dimensions, linear functions; variation problems; simultaneous systems; determinants; quadratic

equations and systems; radical equations; exponents and logarithms; logarithmic equations; togonometric ratios and functions; identities; sine and cosine waves; solution of right angled triangles; vector applications; arithmetical and geometrical progressions; work with complex numbers; related engineering applications.

Prerequisite: Grade XII Mathematics, or equivalent. Fee \$35.00, 24 sessions.

704 Mathematics II

Tuesdays, 7:00 to 9:30 p.m. Binomial theorem, approximations; elements of analytical geometry, straight line equations, locus problems, conic sections; polar coordinate systems, solution of oblique triangles, and sigma notations; introduction to differential and integral calculus; average and instantaneous rates of change; the limit concept; differentiation of nonlnear trigonometric, exponential and logarithmic functions; differentials; motion analysis; relative maximum and minimum; area under a curve; the concept of an integral; anti-differentiation of algebraic functions; indefinite and definite negrals; applications to areas and motion analysis Prerequisite: Mathematics I, or equivalent Fee \$35.00, 24 sessions.

705 Mathematics III

Poynomial functions and equations; solving for institutional roots; Descartes' rule, location principle, which is method, differentiation of a function of a function of a mplicit differentiation; higher order curve tracing; related rates; differentiations in applications in a function of a function curve tracing; related rates; differentiation; applications in a function of a function curve tracing; related rates; differentiation; applications in a function of a function curve tracing; related rates; differentiation; applications in a function of a functio

mic functions; engineering applications; methods of integration; geometrical applications; areas, volumes, length of arc, surface areas. Prerequisite: Mathematics II. Fee \$35.00, 24 sessions.

708 Thermodynamics

Mondays, 7:00 to 9:30 p.m.

The nature, units and measurement of heat, work and power. The basic gas laws; isothermal, adiabatic, polytropic, constant volume and constant volume processes. First and second laws of thermodynamics; the non-flow energy equation. The concept of reversibility and the Carnot Cycle; Ideal Brayton, Otto and Diesel Cycles; actual engine cycles and power developed in ideal engine cycles. Evaluation of solid, liquid and gaseous fuels; combustion problems involving calorific values and air requirements for combustion. Engine testing; dynamometers and engine indicators. Determination of brake and indicated horsepowers, efficiencies, fuel consumption, and other performance criteria. Basic heat transfer, convention, conduction and radiation. The generation and properties of steam; the characteristics of thermal and nuclear power generating plants. Entropy and its applications. Ideal and modified Rankine cycles; regenerative and reheat steam cycles. Use of steam tables and the Mollier Diagram for the solution of problems. Refrigeration; characteristics of vapour compression and of absorption refrigeration systems and of the types of refrigerants used. Calculations involving the use of vapour tables and pressure-enthalpy diagrams. The heat pump and its characteristics. Prerequisite: Mathematics III, Physics I. Fee \$35.00, 24 sessions.

709 Metallurgy

Tuesdays, 7:00 to 9:30 p.m.

The structure of metals; properties of metals; binary constitutional diagrams; iron carbon diagram; production of pig iron; steel and steel making; plastic deformation and recrystallization; working and shaping of steel; alloy steels; nonferrous metals and their alloys; decomposition of austenite; the T-T-T diagram; factors affecting the shape of the T-T-T diagram; hardenability; annealing, normalizing, spheroidizing quench hardening and tempering; case hardening; age hardening; heat treating; equipment; physical testing of metals. Investigation of metallurgical failures. Prerequisite: General Chemistry. Fee \$35.00, 24 sessions.

710 Alternating Current Circuits

Wednesdays, 7:00 to 9:30 p.m.

Series circuits, resonance, Q and selectivity; parallel circuits, the circle diagrams; network analysis and network theorems with delta-type transformations, C-R and L-R time constants, applications and universal curves; iron ore and aircore transformers with impedance relations, phasor diagrams, tuned and untuned coupling; polyphase systems, 3-phase 3-wire, 3-phase 4-wire balanced and unbalanced systems, 3-phase, power measurement, harmonic and complex waves, non-sinusoidal waves in linear impedance networks. Prerequisite: Electrical Fundamentals, Mathematics III. Fee \$35.00, 24 sessions.

711 Business Communications (English I) Thursdays, 7:00 to 9:30 p.m.

Short Essays to display the student's ability to

write properly structured and punctuated sentences; good paragraphs exhibiting qualities of unity, coherence and adequate development, and to use adequate vocabulary with correct spelling. Precis writing to convey the essential meaning of a given message in about one-quarter to onethird the length of the original. An appreciation of a suitable prose passage to develop the student's comprehension of the content, understanding of the author's purpose, and recognition of the means by which he has produced his effects. Business letters indicating not only the mechanical presentation, but also, and chiefly, the student's ability to incorporate in his letter the essential philosophy of business writing to the end that the purpose of the letter is clearly and briefly accomplished. An examination of the library as a source of information: - classifition schemes, reference tools and so on. Prerequisite: Grade XII English, Equivalent Subject: Grade XIII English. Fee \$35.00, 24 sessions.

713 Electrical Equipment

Tuesdays, 7:00 to 9:30 p.m.

Operating principles and characteristics of direct and alternating current motors and generators; single phase motors; transformers; emphasis on machine's transfer function, equivalent circuit and effect in systems. Prerequisite: A.C. Circuits. Fee \$35.00, 24 sessions.

714 Electrical Fundamentals

Thursdays, 7:00 to 9:30 p.m.

Nature of electricity; basic electrical units; simple series and parallel electric circuits, magnetism, inductance, capacitance, the nature of alternating

current; reactance and impedance; series resonance circuits; measuring instruments. Prerequisite: Mathematics I. Fee \$35.00. 24 sessions.

715 Electrical Measurements

Mondays, 7:00 to 9:30 p.m.

Techniques of precision measurement of resislance, inductance, capacitance, current, voltage, power, frequency and phase angle, and magnetic flux: theory of the instruments involved: techniques of statistical measurements; equations used in bridge circuits and instruments, temperature measurement. Prerequisite: A.C. Circuits. Fee \$35.00, 24 sessions.

716 Electronic Circuits

Wednesdays, 7:00 to 9:30 p.m.

The use of basic devices in amplifier, oscillator, modulator and detector circuits. A complete analysis of superheterodyne receiver principles. Regulated and unregulated power supplies. Prerequisite: Electronic Fundamentals. Fee \$35,00, 24 sessions.

717 Electronic Fundamentals

Tuesdays, 7:00 to 9:30 p.m.

An introduction to two and three-element semiconductor devices with some attention to the analogous vacuum-tube devices. The topics should include the physical behaviour, graphical analysis and equivalent circuit analysis of these devices Prerequisite: Electrical Fundamentals, Mathematics II. Fee \$35.00, 24 sessions.

719 Highway Technology

Wednesdays, 7:00 to 9:30 p.m. Horizontal circular curves — definitions, notation,

geometry of simple curve calculations. field layout; spiral curves - definition, notation, geometry, calculations and field layout; superelevation theory — design speed, rate of superelevation, side friction, theoretical methods of attaining superelevation on simple curves with and without spiral curves length, calculations and problems; vertical parabolic curves, highest and lowest point on vertical curves; locations surveys controls for vertical and horizontal alignment. office and field procedures; soil surveys - field equipment and procedures, soil sampling and tests, soils profiles and design reports; plans, profiles and cross-sections — data shown on construction plan and profile, example of each using current DHO plans and profiles; alignment and gradelines - visibility, site distances and other factors influencing alignment and position of gradeline; granular base and sub-base materials - characteristics of subgrade, subbase, base and shouldering materials, control tests and specifications; pavement structures definition of rigid, flexible and composite pavements, purpose of each component part, methods of designing flexible pavements; drainage description and design of drainage structures; construction methods — excavations — general construction procedures and equipment, measurement and calculation of quantities, field problems, construction methods - embankments - methods, materials, control of compaction, equipment, methods of payment, measurement and calculation of quantities. Prerequisite: Surveying, Mathematics II. Fee \$35.00. 24 sessions.

721 Mechanics I

Tuesdays, 7:00 to 9:30 p.m. Forces: characteristics, units, transmissibility, components and resultants, moments, couples, Free Body Diagrams, Coplanar and parallel force systems, resultant, equilibrium, Simple trusses and frameworks; analytical method of joints. Coefficient of friction, static and kinetic friction angle of friction and repose; cone of frictions. Centroids and centres of gravity of simple areas and solids. Radius of gyration. Classes of motion; displacement, velocity and acceleration; Newton's Laws of motion, freely falling bodies, Galileo's equations; accelerating and inerita, friction and other forces. Angular displacement, velocity and acceleration, relationship between angular and rectilinear motion; equations of rotational motion; moments of inertia of simple and composite bodies; radius of gyration. Work, energy and power. Definitions; work done by constant and variable forces; potential and kinetic energy; power equations and efficiency. Impulse momentum and impact; definitions and equations. Prerequisite: Mathematics I. Fee \$35.00, 24 sessions.

722 Mechanics II

Wednesdays, 7:00 to 9:30 p.m.

Review of force systems. Resultants and equivalents of coplanar Concurrent, non-coplanar parallel and non-concurrent and non-coplanar concurrent force systems. Bows notation and analysis of frameworks. Friction on an inclined plane, screw threads, efficiency, rolling resistance, belt friction, belt drives. *Dynamics* — Relative velocity: vectorial differences of two velocities, absolute velocity, simple velocity and

acceleration diagrams. Moment of inertia and angular acceleration. Work done by a torque. fluctuation of energy, the flywheel, power, Centripetal and centrifugal acceleration and force - the conical pendulum and governors. Balancing of rotating masses. Stability of a vehicle on a circular path; banking, stresses in flywheel rims. Simple harmonic motion. Pressure and flow of liquids: - Fundamental laws, pressure at any depth, pressure head, force on inclined planes centres of pressure, the Archimedean Principle. Potential kinetic and pressure energy, total energy: Bernouilli's theorem, Effect of friction, D'Arch's formula, flow through orifices. Prerequisite: Mathematics III. Mechanics I. Fee \$35.00, 24 sessions.

723 Mechanics of Materials I

Tuesdays, 7:00 to 9:30 p.m. Mechanical properties and testing: Standard destructive tests, equipment and reports; stressstrain terms, creep, percentage elongation, factor of design, modulus of elasticity, etc., supplied to tensile, compressive and shear applications, units. Comparative properties of engineering materials. Poisson's ratio. Statically indeterminate cases including thermal and compound-material studies. Statically determinate beam-type members: — Equilibrium, sheer and bending moment diagrams and relationships, elastic curve, inflection points, longitudinal shear stress, moment of inertia; design equations, deflection. Thin cylinder and sphere stress analysis; welded and riveted joint strength. Stresses, strains and relationships due to torsion on shafts and helical springs. Resilience due to gradual, sudden and impact loadings. Principal stress studies using Mohr's circle

method. Introductory study of columns.
Prerequisite: Mathematics II, Mechanics I.
Fee \$35.00, 24 sessions.

724 Surveying

Saturdays, 9:30 a.m. to 12:00 noon Importance of surveying, field notes, basic definitions, errors and mistakes, measurements of horizontal distances, slope measurements. Corrections for measured distances, precision and accuracy required. Use of simple distance measuring equipment. Measurement of angles, engineer's transit, compass, adjustment of transit. Measuring angles and distances with a transit. Differential, trigonometric, profile and crosssection levelling. Methods of stadia, self-reducing stadia instruments, plane table. Topographic surveys, contour lines. Direction of a line, magnetic meridian and declination, isogonic chart, azimuth and bearing of a line. Traverse surveys and computations, closing a traverse by latitudes and departures. Traverse computations error of closure, distribution of errors, co-ordinates, area of double meridian distance. Construction surveys, municipal surveys, line, grades, methods at setting line and grades. Horizontal circular curves, theory, computations, field practice. Prerequisite: Mathematics I. Fee \$35.00, 24 sessions.

725 Technical Drawing

Wednesdays, 7:00 to 9:30 p.m.
Instruments, lettering, line quality. C.S.A.
Standards. Single-view drawings. Third-angle orthographic projected and multiview drawings objique and isometric projection. Freehand drawing techniques. Dimensioning, sectional and

auxiliary views. Fasteners including riveted and welded joints and screw thread symbols. Pipes, fittings and valves including line drawing and symbols. Assembly drawing, bill of materials. Detail drawing to include surface finish and manufacturing methods. Conic sections; helix and other loci; gear teeth profile and proportions. Developments and intersection curves. Cam profiles and displacement diagrams. Symbols, wiring, block and schematic diagrams for simple electrical and electronic circuits. Fee \$35.00, 24 sessions.

726 Theory of Machines

Mondays, 7:00 to 9:30 p.m.

Simple and compound gear trains. Epicyclic gearing including bevel gears, differentials, torque and power. Motion — displacement, velocity, and acceleration, including sliding velocities and Coriolis' component of acceleration. Forces in mechanisms. Static and dynamic balancing in one and more planes, graphical solution. Reciprocating masses. Balancing machines. Gyroscope — applications and fundamental theory. Critical speed of shafts. Cam and follower classification, cam layout for constant velocity and acceleration, and simple harmonic motions. Flywheel analysis. Governor — application and forces. Prerequisite:

728 Theory of Simple Structures

Mechanics II. Fee \$35.00, 24 sessions.

Wednesdays, 7:00 to 9:30 p.m.

Analysis of statically determinate plane trusses and three hinged arches subject to static loads (graphical and analytical solutions) and statically determinate beams, trusses and arches subject to moving loads; a description of indeterminate structures and the various methods of analysis;

approximate analysis of indeterminate structures such as trussed frames or Mill bulidings and rigid frames subject to horizontal loads (Portal and cantilever methods); deflections or statically determinate plane trusses, frames and beams (Williot diagram, moment area method, conjugate beam method). Prerequisite: Mathematics III, Mechanics of Materials I. Fee \$35.00, 24 sessions.

731 Advanced Plane Surveying

Saturdays, 9:30 a.m. to 12:00 Noon
Contours: Location, Plotting and Profile; Stadia
Surveying; Lines and grades for roads and
sewers; Calculation of Excavations and embankments; Volume calculations; Horizontal curves;
Location of points by triangle; Construction and
As-Built plans; Right-of-way plans; topographic
drawings; Subdivision plans; Legal Survey plans;
Transition curves; Intersection Problems; Vertical
curves; Adjustment and balancing. Prerequisite:
Plane Surveying. Fee \$35.00, 24 sessions.

733 Control and Electronic Surveying

Saturdays, 9:30 a.m. to 12:00 Noon
Concepts of shape and size of earth; Principles, equipment and methods of geodetic surveying;
Problems in urban control survey; calculation of geographic position; Transformation of geographic to plane co-ordinates; Conformal projections; Classification of electronic surveying instruments; Fundamental Electronics; Electromagnetic Waves; Operation of electro-optical and electro-magnetic equipment; Equipment maintenance; Reduction of observations.
Fee \$35.00, 24 sessions.

734 Legal Surveying

Thursdays, 7:00 to 9:30 p.m.
The Surveyor's Act; Surveys under The Surveyor's Act; Registry Act; Land Titles Act.
Fee \$35.00, 24 sessions.

735 Photogrammetry

Tuesdays, 7:00 to 9:30 p.m.
Stereoscopic observations; Survey cameras and films; Flight planning and navigation; Geometry of single photo; Rectification, mosaics; Radial line triangulation; Geometry of stereo photos; Orientation of spatial models. Fee \$35.00, 24 sessions.

736 Plane Surveying

Saturdays, 9:30 a.m. to 12:00 Noon
History of surveying; general theory of measurement; types and sources of error; measurement of horizontal distance; levelling; construction of levels; measurement of horizontal angle; construction of transit; Azimuth and bearings; closing traverses by latitude and departure; co-ordinates; D.M.D. areas; use of drafting instruments; mechanical lettering; projections and sections; methods of plotting survey information; contour plans; solution of plane triangles; use of logarithms; use of desk calculators; non-linear; interpolation; series expansion for angle functions; use of nutshell tables. Fee \$35.00, 24 sessions.

Special Interest Subjects

Requirements for Admission: The minimum entrance requirement is the Ontario Secondary School Graduation Diploma obtained after successful completion of any Grade 12 (Ontario)

729 Welding Technology

Mondays, 7:00 to 9:30 p.m. Course developed in conjunction with the Association of Professional Engineers. Ferrous and non-ferrous metals used in welding. Mechanical and physical properties of materials with particular reference to effect of welding. The full range of welding processes. Filler metals and electrode classification. Metallurgical aspects of welding to include grain structure and size, iron-carbon diagram, effect of time on coolingphase diagram, heat-treating, stress relieving, atmosphere effects, heat affected zone, carbon precipitation, cracks, blowholes, inclusion, etc. Specific elements affecting weldability, stress control, chemical analysis, hardness, preheating and tempering porosity, parent metal properties and selection of electrodes for low, medium and high carbon steels, alloy steels, cast iron and austenitic, medium and high carbon steels, alloy steels, cast iron and austenitic, martensitic and ferritic types of stainless steels. Welding problems associated with standard, tool and die, and other alloy steels, non-ferrous materials and alloys. titanium, tantalum, columbium, zirconium, molybdenum. The making and testing of a good weld. Fee \$35.00, 24 sessions.

730 Modern Survey Methods

Saturdays, 9:30 a.m. to 12:00 Noon
Course developed in conjunction with the
Association of Ontario Land Surveyors. This is a
general interest course and will provide an
appreciation of modern surveying equipment,
methods and techniques. The tilting level; the
optical reading transit; the automatic level: the

direction theodolite, traversing equipment; electronic surveying equipment — Tellurometer and Geodometer; the reduction tachometer; geodetic level. Fee \$20.00, 12 sessions.

Ceramic Technology

Mondays, 7:00 to 9:00 p.m.

Humber College, in cooperation with the Canadian Ceramic Society, offers a certificate in "Ceramic Technology" upon successful completion of a three year course of study. This course is primarily designed for those engaged in the ceramic industry, but is also of value to those concerned with, or interested in, the utilization of ceramics in related fields and dependent processes. The course is primarily intended to upgrade the technical competence of manufacturing personnel such as foremen, supervisors, lab technicians and quality control technicians. The course content is slanted towards production and represents a change from the Ceramic Technology course offered in previous years.

First Year: 737 Raw Materials

738 Forming and Drying

Second Year: 739 Heating, Firing & Thermal

Reactions

740 Quality Control and Testing

Third Year: 741 Industrial Ceramics I

742 Industrial Ceramics II

Detailed information is avaliable from the Canadian Ceramic Society, P.O. Box 426, Don Mills, Ontario. Fee \$70.00 per year, 24 sessions.

College Preparatory Subjects

900 Basic Technical English

Tuesdays, 7:00 to 10:00 p.m.

This course is designed for those who have some difficulties with English and feel they need remedial work before they enrol in a trade area subject. It would be useful for new Canadians who have some facility with the language and for those who feel some review of writing is required. Fee \$20.00, 12 sessions.

901 Basic Technical Mathematics

Thursdays, 7:00 to 10:00 p.m.

A program designed for those who wish to enrol in Trade area subjects but who feel that they are weak in mathematics. The course is remedial for those who have previous mathematical background but would like to "brush-up". Fee \$20.00, 12 sessions.

902 Basic Science

Wednesdays, 7:00 to 10:00 p.m.

A program designed for those who wish to enrol in Trade area subjects but who feel that they are weak in science. The course is remedial for those who have a previous science background but would like to "brush-up". Fee \$20.00, 12 sessions.

903 Basic Mechanical Drafting

Mondays. 7:00 to 9:00 p.m.

An introductory course in drafting for those in industry who require a general ability in this area.

Specifically the program is aimed at potential trades students who will need a foundation in drafting in their courses. Fee \$20.00, 12 sessions.

904 Introduction to Electronics

Thursdays, 7:00 to 9:00 p.m.

This course is designed for those people who would like to enrol in an Electronic Technician's program at Humber College but who did not have an Electronics background in Secondary School. The purpose of the course is to give the student a sufficient basis in electronic theory so that he will not be at a disadvantage in the technician program. Admission Requirements: Grade 12 or equivalent. Fee \$35.00, 24 sessions.

905 English I

Tuesdays. 7:00 to 9:30 p.m. Short Essays to display the s

Short Essays to display the student's ability to write properly structured and punctured sentences; good paragraphs exhibiting adequate vocabulary with correct spelling. Precis writing, appreciation of prose, business letters, and an examination of the library as a source of information will be included. Prerequisite: Grade XII English; EquivalentSubject: Grade XIII English. Fee \$35.00, 24 sessions.

906 Mathematics I

Mondays, 7:00 to 9:30 p.m.

Approximate numbers; slide-rule and mathematical tables; operations involving physical dimensions linear functions; variation problems; simultaneous systems; determinants; quadratic equations and systems; radical equations; exponents and logarithms; logarithmic equations; trigonometric ratios and functions; identities; sine and cosine waves; solution of right angled triangles; vector applications; arithmetical and geometrical progressions; work with complex

numbers; related engineering applications.
Prerequisite: Grade XII Mathematics. Equivalent
Subject: Grade XIII Algebra, Trigonometry, and
Statics. Fee \$35.00, 24 sessions.

907 Mechanics I

Wednesdays, 7:00 to 9:30 p.m.

Forces, characteristics, and units, transmissibility. components and resultants, moments, couples. free body diagrams: Coplanar and parallel force systems, resultants, equilibrium; Simple trusses and frameworks; analytical method of joints; Coefficient of friction, static and kinetic, angle of friction and repose: cone of frictions. Centroids and centres of gravity of simple areas and solids. Second moments of simple and composite concept of radius of gyration. Classes of motion: displacement, velocity and acceleration; Newton's Laws of motion: freely falling bodies. Galileo's equations; accelerating and invertia forces, friction and other forces. Angular displacement, velocity and acceleration, relationship between angular and rectilinear motion; equations for rotational motion moments of inertia of simple and composite bodies; radius of gyration. Work energy, and power; Definitions; work done by constant and variable forces; potential and kinetic energy; power equations and efficiency. Impulse momentum and impact definitions; and equations. Prerequisite: Mathematics I. Fee \$35.00. 24 sessions.

Trade Subjects

908 Sheet Metal Theory Part I

Mondays, 7:00 to 9:30 p.m.

An investigation of types of seams, location and manufacture of parts, hand tools, equipment use

and maintenance, base metals, cooled metals manufacture gauge and use. Duct systems, furnace and heating symbols will be examined. This course is for basic apprentices and apprentices who have had difficulty in qualifying in theory fundamentals. Fee \$20.00, 12 sessions.

909 Sheet Metal Theory Part II

Mondays, 7:00 to 9:30 p.m.

An investigation of construction materials, city bylaw, installation of low and high pressure systems and their parts, definitions of terms for H.V. and A.C. velocities and resistances of air flow, measuring equipment. This course will be offered in the winter semester as a continuation of Sheet Metal Theory Part I. Fee \$20.00, 12 sessions.

910 Sheet Metal Part I

Tuesdays, 7:00 to 9:30 p.m.

This course will cover use of drafting equipment by parallel line and radial line developments, oblique cylinder by parallel line and radial line methods. Approximately 25% of time will be spent on shop work. Admission Requirements: Grade 10 or equivalent. Fee \$20.00, 12 sessions.

911 Sheet Metal Part II

Wednesdays, 7:00 to 9:30 p.m.

An examination of regular and irregular tapers, square to round and other transitional pieces, tapered elbows of different sections, streamlined fittings, double and multiple branches of different sections, all by tri-angulation method. Admission requirements: Sheet Metal Part I or its equivalent. Fee \$20.00, 12 sessions.

912 Sheet Metal Design and Installation

Thursdays, 7:00 to 9:30 p.m.

Labour legislation for the Construction Industry. city by-law underwriters, definition of terms, use of N.W.A. and A.C.A. manuals for heat loss and gain, pipe sizing and location of outlets and inlets in residential installation, types of fans, air flow and types of instruments used, calculations in ventilation, heating and pipe sizing by velocity method, use of chart and tables. Admission Requirements: Journeyman Standing in sheet metal, Fee \$20.00, 12 sessions.

913 Basic Steamfitting

Wednesdays, 7:00 to 9:30 p.m.

This course is an introduction to elementary mathematics and physics, hot water systems, circuits, zones, controls, direct and indirect converters, heat loss calculations, isometric drawing template design and schematic drawings. Steam systems, temperature pressure relationships, borders, heating elements, high pressure generating stations will also be examined. Admission Requirements: Grade 10 or equivalent. Fee \$20 00. 12 sessions.

914 Steamfitting—Qualification Course (Pre-Licence)

Tuesdays. 7:00 to 9:30 p.m.

This course will review applied mathematics, basic science gravity hot water systems, baseboard heating, radiant heating, steam heating systems, types of equipment used on heating systems. Admission Requirements: For indentured apprentices preparing to write the license examination. Fee \$20.00, 12 sessions.

Steamfitting Design and Installation 915

Thursdays, 7:00 to 9:30 p.m.

This course is a review of hot water and steam. systems, labour legislation pertaining to building trades, codes and regulations, heat loss calculations, radiation selection, design of heating systems, control of systems, and basic air conditioning. Admission Requirements: Journeyman standing in Steamfitting. Fee \$20.00, 12 sessions

916 Plumbing Qualification Course

Wednesdays, 7:00 to 9:30 p.m.

This is designed as a refresher course in plumbing theory for those wishing to write the Ontario Certificate Qualification examination or the Inter-Provincial examination. Both the Provincial and "National" plumbing codes will be studied. Fee \$20.00, 12 sessions.

917 Electrical Construction 1

Mondays, 7:00 to 9:30 p.m.

A general introduction to Electrical Construction including Ohms law, series circuits, combination circuits, two wire distribution, line loss, power efficiency, and Hydro Electric Power Commission Regulations. Some of the class time will be given to shop projects, Admission Requirements: Grade 10 or equivalent. Fee \$20.00, 12 sessions.

918 **Electrical Construction 2**

Tuesdays, 7:00 to 9:30 p.m.

This course will investigate wire calculations, batteries, magnetism, electro-magnetism, induction, three wire distribution, and appropriate Hydro Electric Power Commission regulations. Some of the class time will be given to shop projects.

Admission Requirements: Electrical Construction Part I or equivalent. Fee \$20.00, 12 sessions.

919 Electrical Construction 3

Wednesdays, 7:00 to 9:30 p.m.

This course will investigate electro-magnetism, induction, D.C. generators, generators set-up and operation, D.C. motor operation and controls and appropriate Hydro Electric Power Commission regulations. Some of the class time will be given to shop projects. Admission Requirements: Electrical Construction Part II or equivalent. Fee \$20.00, 12 sessions.

920 Estimating for the Electrical Trade

Wednesdays, 7:00 to 9:30 p.m.
This is a post-apprenticeship of

This is a post-apprenticeship course for the electrical trade. Plan analysis, take off procedure, transferring and pricing, labour units, installation only projects; adjustment for working conditions, cable poles, pull boxes, labour cost variables, incidental and direct job cost, electrical heating loads will be examined. Admission Requirements: Journeyman Electrician or equivalent. Fee \$20.00, 12 sessions.

921 Hydro Electric Power Commission Regulations

Mondays, 7:00 to 9:30 p.m.

This course is aimed at investigating the authority, interpretations, use of index and application of Hydro Electric Power Commission regulations. Admission Requirements: Applicants must be at least fourth-year apprentices. Fee \$20.00, 12 sessions.

922 Welding

Thursdays, 7:00 to 10:00 p.m.

An introduction to the theory and skills of Oxy-Acetylene Arc, TIG and other Welding forms. The course is designed for people with little or no welding experience. Fee \$35.00, 24 sessions.

923 Carpet Laying

Thursdays, 7:00 to 10:00 p.m.

A program designed for those in the trade or those who wish to enter the trade. Various techniques of carpet laying will be studied as well as carpet types. Fee \$35.00, 24 sessions.

924 Electronics for the Amateur

Wednesdays, 7:00 to 10:00 p,m.

This course will be a survey of A.M.-F.M. radio construction and testing fundamentals, followed by an examination of stereo building and testing techniques. The program is aimed at those who have an interest in electronic "do-it-yourself" projects and will attempt to cover the fundamentals of the most common areas. No formal admission requirements. Fee \$20.00, 12 sessions.

