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NUGGET

NORTHERN ALBERTA INSTITUTE OF TECHNOLOGY
EDMONTON, ALBERTA, CANADA — ASP
NORTHERN ALBERTA INSTITUTE OF TECHNOLOGY

PRIME MINISTER PREMIER MINISTRE

I am pleased to extend warm greetings from the Government of Canada, together with my own, to all the teachers and students of the Northern Alberta Institute of Technology in Edmonton.

We are all celebrating the Centennial of our country this year. It is a good time to reflect on the blessing we all enjoy because we are Canadians.

In our first one hundred years of nationhood, Canada has grown in stature and status beyond the dreams of our Founding Fathers. We have achieved much in this country and in our Centennial celebrations we are acknowledging our Canadian achievements.

Most of all, we have a great variety of human resources in Canada and the Canadian ideal of social and cultural diversity, within a political unity is uniquely encouraging to the wise and compassionate enjoyment of these; most valuable of all our national resources.

This concept of Canadianism is far more demanding on all that is noble in the human spirit than any concept of conformity would be. But it is also far more rewarding, both for our nation and for all individuals whose separate dreams and infinite variety of personal aspirations are all that can ever make any nation endure.

May I wish you all success.

L. B. Pearson.

1867 | 1967

Ottawa,
1967,

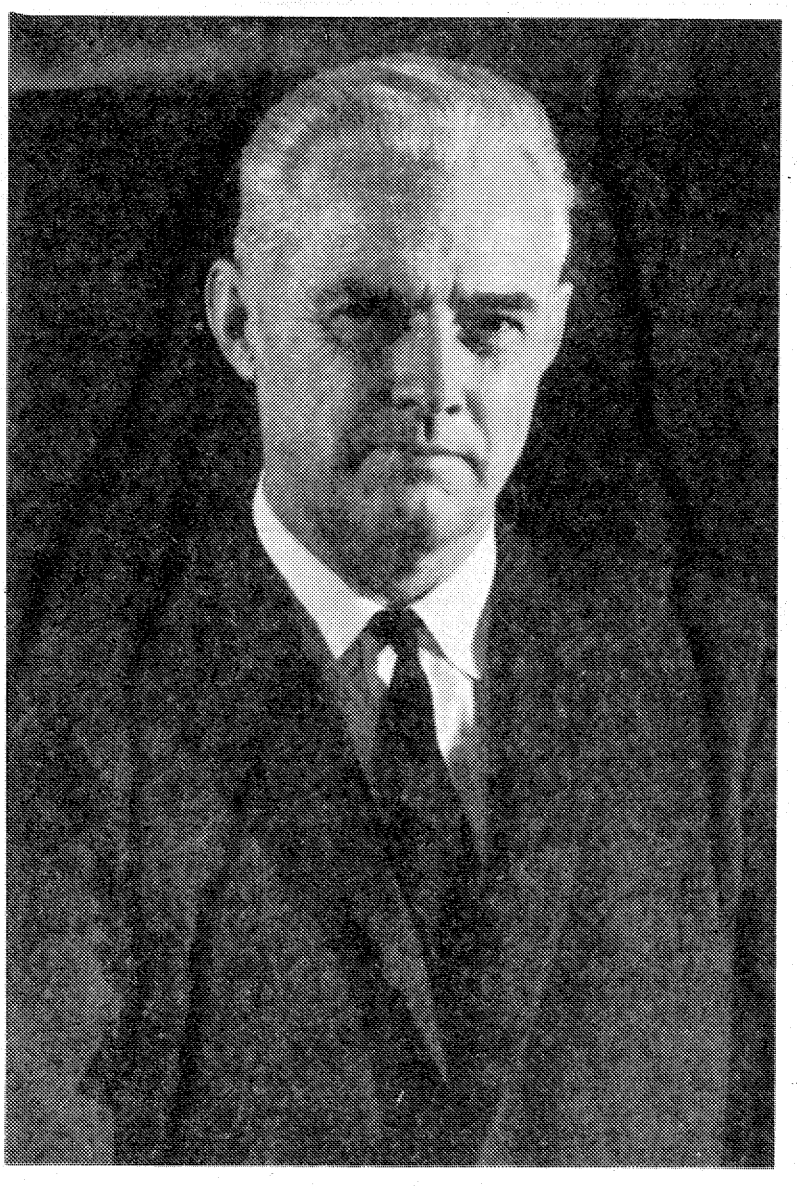
On behalf of the Government of the citizens of Alberta I wish to extend sincere best wishes to the Northern Alberta Institute of Technology on the occasion of its fifth annual Open House. It does not seem possible that five years have elapsed since we opened our second major Technical Institute in this province. However, the fact remains that in this short span of time 30,000 people have received some type of instruction in the four main divisions of the Institute.

We are proud of the fact that we can provide this service to Albertans of all ages, particularly our young people, and we are pleased that this type of training is so well received.

With the ever increasing demand for technically competent people in this province, it is our sincere hope that as many young people as possible will take the opporunity to see for themselves the variety of courses offered at the Northern Alberta Institute of Technology.

May I also extend my congratulations to the students responsible for the Open House edition of the "Nugget". Your unselfish effort in producing this edition is to be admired.

Ernest C. Manning,
Premier of Alberta.



The students and staff of this Institute are happy, once again, to welcome you to our 5th annual Open House. The welcome mat is always at our door but at this time of year we make special arrangements to acquaint you with the various activities of our Institute.

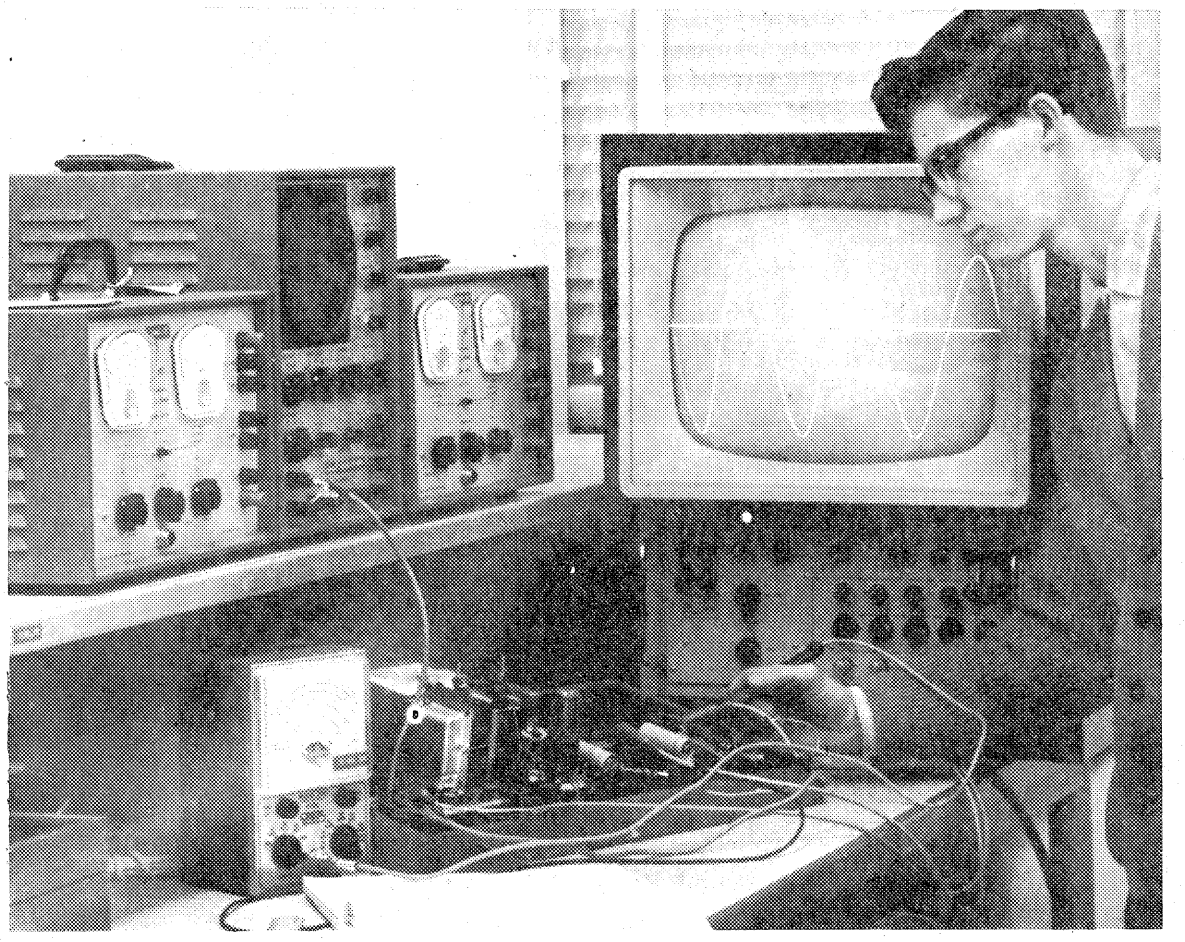
This being Centennial year, we are supposed to take the time to reflect on our one hundred years of nationhood, progress and accomplishment. Somehow it is difficult to relate this Institute to anything connected with the past. We are so young we don't have any fixed traditions, unless we consider instant success a tradition Perhaps we represent the new Canadian concept — youth — change — society today — the Canada of the present.

We hope that as you tour our buildings you will be aware of the spirit generated by our students. This is one of the largest, most modern, best equipped Technical Institutes to be found any place and we believe we have acquired an exceptionally well qualified staff. The students exposed to such an atmosphere seem to have developed into forward looking, responsible adults, willing and able to cope with whatever the future may offer. They are not afraid to try, they are independent in their thinking, and at the same time they have a very healthy respect and concern for their fellow man.

Please take the time to ask them about their courses, you will find them to be proud of their work and willing to talk to you.

W. A. B. SAUNDERS, P.Eng.,
Principal

ELECTRONIC TECHNOLOGY



The Electronic Technology course offered at N.A.I.T. is orientated to provide knowledge and training in electronics which prepares the graduate for employment in industry. Subjects such as mathematics and English are offered to enable the graduate to enter industrial fields of sales, distribution and advertising. Those persons who are more interested in the technical tasks may find greater interest in the laboratory courses which constitute approximately half of the total instruction time. The lab courses are aimed at providing the electronic technologist with the knowledge and skills required to enter research, development and manufacturing.

Each year brings a greater emphasis on computers and supervisory control as applied to industry. With an increasing use of solid state electronics the course is now being revised to give a sounder basis in the use of solid state devices.

Anyone with a senior matriculation can enter an AB programme in which the first two years are combined into an accelerated course. High school graduates who have taken Electronics 22 and 32 courses are admitted directly into Year B.

In Year A the students of Electronics, Exploration and Instrumentation technology are combined into a common course. The student therefore, can, if he wishes, change technologies after his first year. In the AB pattern the first quarter is common and the rest of the programme different.

Next year, 1967-68 it is expected that there will be 200 students enrolled in Year A, 100 in Year B, 160 in Year C and 160 in Year AB. These figures include Exploration and Instrumentation in Year A and Year AB.

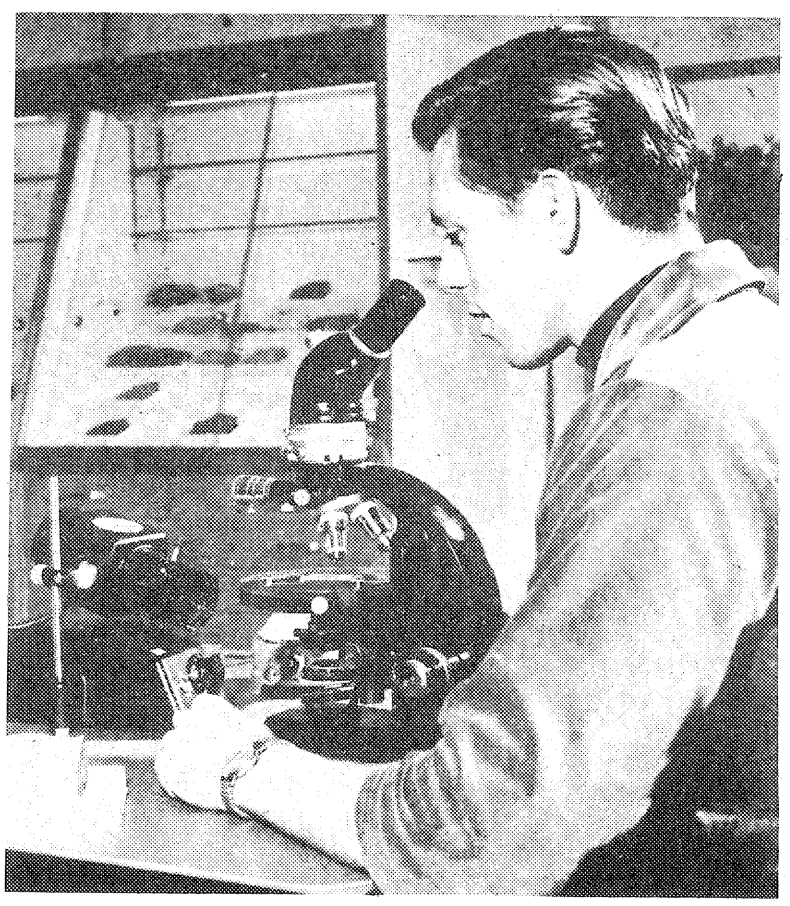
On the social scene the Electronic Technician Student's Society offers a varied programme including parties, dances, a queen campaign, participation in intramural sports, and tours. This year for the first time the Electronics club has sponsored the N.A.I.T. television show. Through club sponsorship the television studio has produced two three-quarter hour shows per week through the closed circuit facilities within the school. In the immediate future we hope to be able to patch in to the Educational TV system that is being organized by the Department of Eduction within Alberta. The membership fee for the student association is $2.00. Membership entitles one to participate in all club activities.

This year a lab room was also opened one night per week to allow students to use school facilities for personal projects or to catch up on lab assignments.

Any student in Electronic Technology may become an associate member in the Institute of Electrical and Electronic Engineers. This is a professional organization set up for the exchange of current information of importance to the electrical and electronic industries.

To get some idea of the projects and services of the electronic technology course a series of Open House Displays have been erected by the members of the electronics club.

ELECTRONIC TECHNOLOGY



Canada is one of the few countries in the world with an abundance of primary natural resources, such as base metals, rare metals, natural gas and petroleum. The majority of these minerals still lie untouched and hidden within the confines of the earth.

It is the search for these untapped riches, which becomes the main concern of the Exploration Technologist. In order that this search can be carried out successfully, intelligent planning and programming are of primary importance. The explorationist must therefore be thoroughly familiar with the use and operation of all equipment available to him, as well as a sound knowledge of geology and geophysics.

The Exploration Technologist will be required to work with a wide variety of electronic gear and it is therefore essential that he has an understanding of electronic principles and applications. As a result the prospective student starts his career at N.A.I.T. with an intensive study of electronics, physics, mathematics and English. Before the student can understand the complete operation of the instruments and the subsequent interpretations, it is a must that he is proficient in the above mentioned courses.

Geophysics, its uses and applications, is taken in detail for a full year.

Geology is the study of the earth, its structure, the changes it has undergone, and the causes which are responsible for the alterations in the crust.

Petrology and mineralogy involves a detailed study of the formation of minerals, the genesis of economic mineral deposits and the study and classification of common rocks and minerals. The study is supplemented with laboratory study of the specific minerals and rocks under study.

The study of geochemistry entails the chemical aspects of geology. The laboratory work in this section comprises qualitative mineral identification and analysis of elements commonly encountered in geochemistry.

In order to understand the happenings at the surface of the earth, an understanding of the earth's interior and processes involved in the alteration of the crust is essential. The study in Geotectonics and Structural Geology concerns itself with the evolution of the continents, earthquakes and earth structures, fault and fold classification. To increase his understanding of these processes the student constructs structural cross-sections, tectonic maps, and problems of structural geometry.

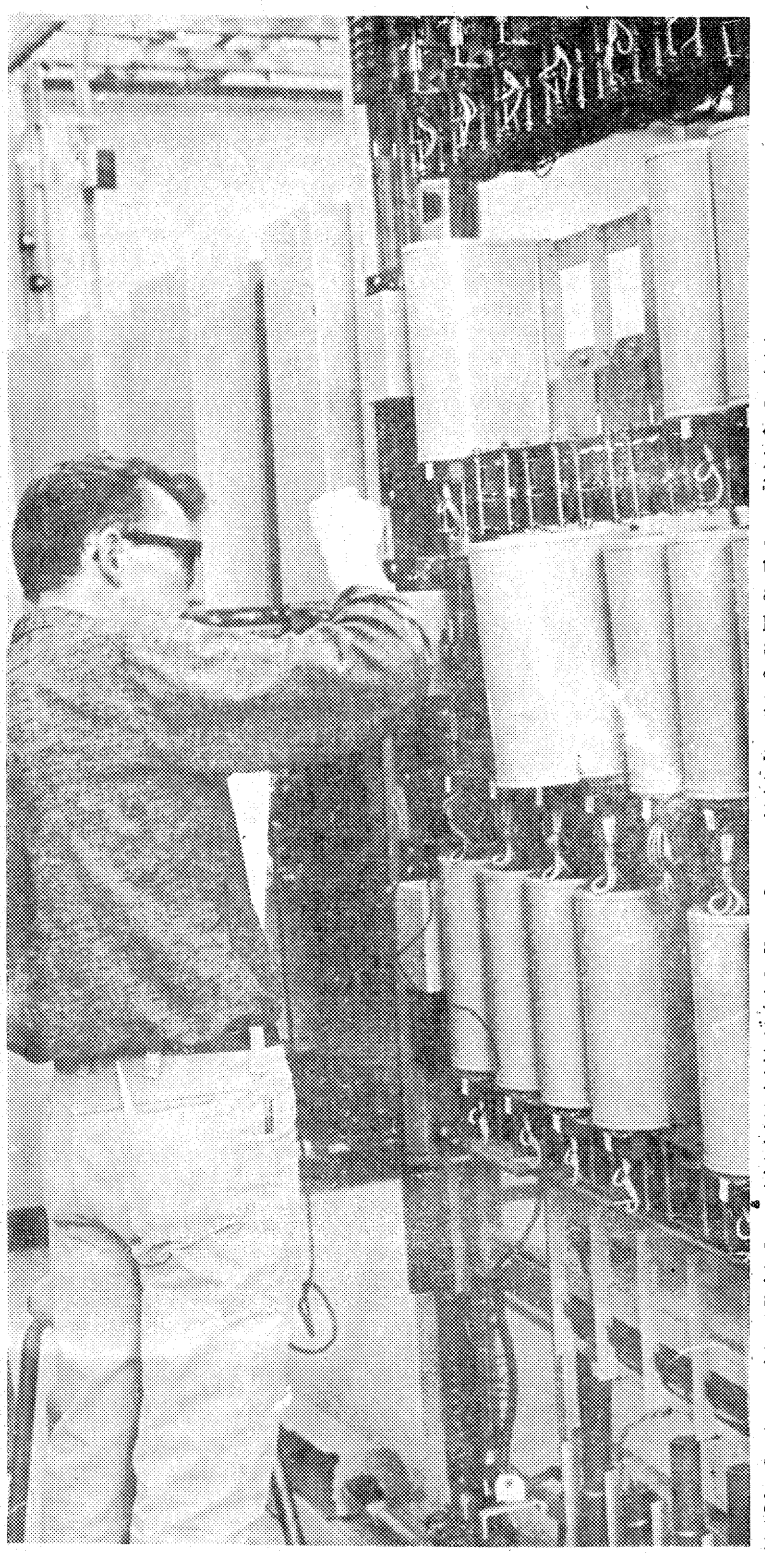
Geophysics is the study of the earth below the surface by physical measurements. During his final year the student will become familiar with most of the instruments employed in geophysical exploration. A comprehensive study is made of (a) Seismic Prospecting both refraction and reflection methods, involves the finding and locating of favorable structures for the accumulations of gas and for oil, by interpretation of data obtained through shooting techniques.

(b) Gravity and Geomagnetic Prospecting — This includes the use of gravimeter, the principles involved in gravity field measurements and data reductions. Geomagnetic prospecting involves the earth's magnetism and principles of magnetic prospecting are studied and interpretations of magnetic data made and evluated.

(c) Electrical Prospecting—This incorporates self-potential resistivity and electro-magnetic methods in mineral exploration. All these different methods are supplemented with actual field problems, which are reduced and evaluated by the student in the laboratory.

These then are the main courses of study. In addition the student also takes up surveying, drafting and an introduction to computors. In the last year of studies the student will have a choice of options, he may either study towards a mining career or a petroleum oriented job.

The future for the Exploration Technologist looks very bright indeed. Whether your interest lies in mining or the oil patch, interesting and rewarding careers are available in greater numbers than there are graduates.



INSTRUMENTATION ..... A VOCATION TO CONSIDER

Many people are unfamiliar with what is involved in Instrumentation Technology. Probably one of the best definitions is that Instrumentation is the science of applying devices and techniques to measure, record, monitor and control plant equipment and process operations.

Instrumentation technology is a relatively new and expanding field, requiring a great degree of knowledge in electronics, pneumatics, and chemistry of processes. Because it is a new field in technical training, there is a lack of properly trained people in industry. It is therefore the function of this institute to train young men to function efficiently in the atmosphere of industrial instruments, as well as to provide a basic knowledge in the sciences which will enable him to keep pace with the rapid development of new methods and mechanisms in the field of automation.

The basic two year instrumentation course is devoted to training the student in the operation of instruments, actual lab training by using the instruments, theory and operation of related electronic circuits, chemistry, physics, mathematics, and English. Because of the rapid development of new instruments and the large number of existing types of automatic controls, it would be impossible for the student to study them all. Therefore the instrument theory course is designed to give the student a sound knowledge of the principals of automatic control, and in this way enable him to cope with practically all types of existing industrial instrumentation. In the future it is hoped that a post-graduate course will be offered to Instrumentation Graduates to help keep them abreast with new developments in the automatic control field. As the course progresses the amount of time spent in the Lab increases to about half the total training hours. Here the student will learn fault analysis, instrument repair, and installation. Tube fitting is also studied as well as a short course in welding. At this institute we are fortunate to have perhaps the most completely equipped instrument lab in Canada. Upon completion of the new "J" Wing of the institute, the existing instrument lab will be moved to more spacious and fully equipped quarters.

This course, as mentioned before, is relatively new and has had its growing pains. However, most of the early problems have been eliminated and the new student will find the entire course is highly organized and very efficient.

You may wonder whot the job opportunities are in this field. After all, there is not much point in attending a two or three year program if after that time you are unable to obtain employment. By all standards the opportunities are excellent. In Canada there are only three institutions training instrumentation technologists. Consequently the demand for graduates exceeded the supply. Last year the average was two job offers per graduate, with the average starting salary at $440.00 per month. These jobs were divided primarily between industry and sales positions.

This has been a brief outline as to what instrumentation is all about. Of course there is much more in this field than can be learned from books alone. Practical experience and a good mechanical appitude are great assets. If you are a person who is able to meet the requirements as set down by the Institute, there is a world of opportunity awaiting you.

UNLIMITED OPPORTUNITIES IN TELECOMMUNICATIONS

Telecommunications Technology is the first course of its type taught in Canada, therefore grads should have unlimited opportunities. Up until now, major telephone companies have been training their own technicians or hiring engineers to fill positions that the Telecommunications Technician is being trained to hold.

The Telecommunications Technician works in the broad field related to telephone, carrier, microwave, electronic switching and other communication fields. Much emphasis is also placed on computers since automation is also taking over in this field.

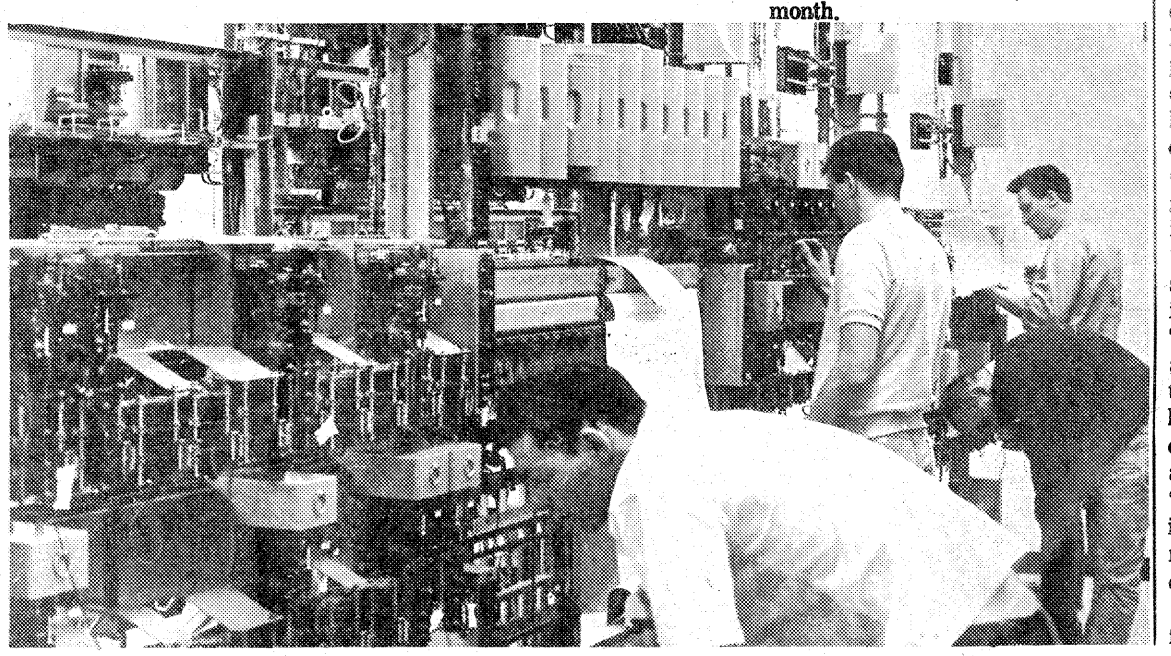
Students enrolled in Year "A" are given training in basic electricity, electronics, math, physics and English. Much emphasis is placed on math and physics since at the completion of this year students gain their High School Diplomas. Transistor and tube circuits are studied in much detail so that the student will have a complete knowledge of basic electronics.

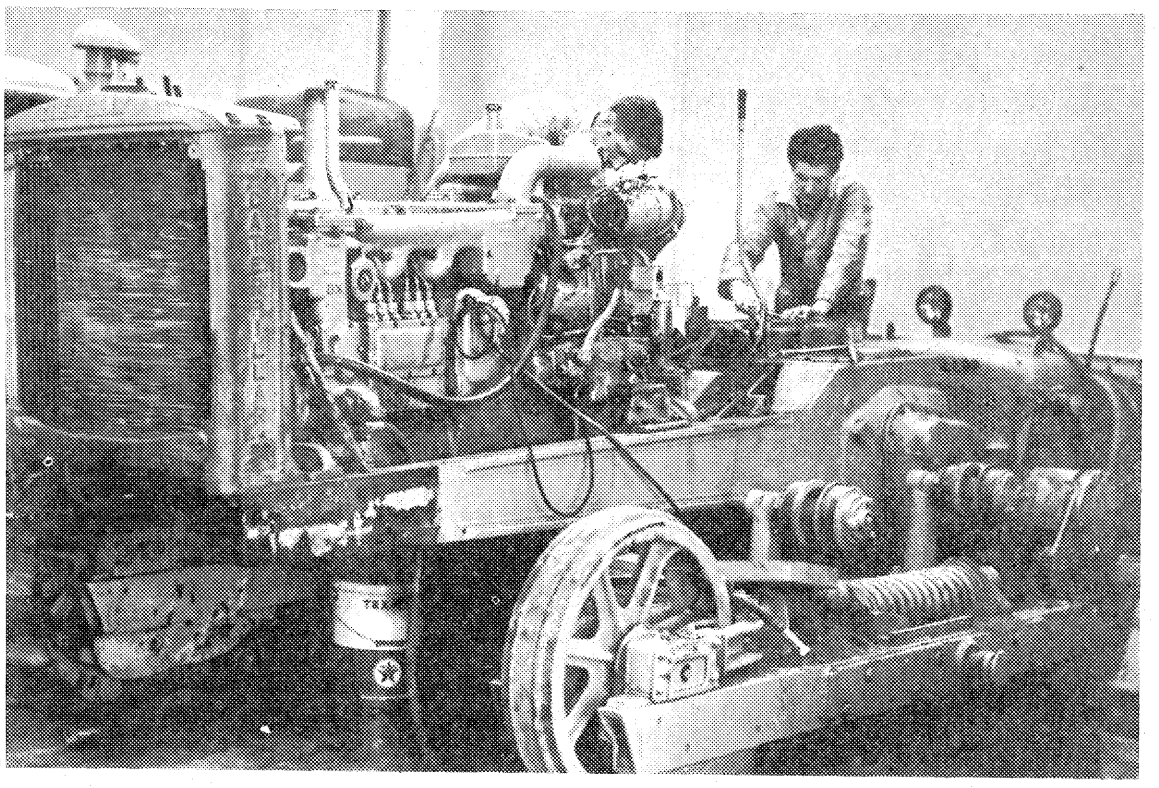
When a student begins Year "B", he gets into the actual Telecommunications courses. Courses are taken in subscriber equipment, step-by-step switching, electronics, carrier, radio and transmission lines. These courses are supplemented by courses in math, physics and English. Some other related courses are also taken. Operational equipment is used in the labs, so that the students get experience on equipment that is in use in industry.

An accelerated course is also offered to students that have completed Grade 12 and have high standings in math, physics and English. A student enrolled in this program is given a combined "A" and "B" Year.

Students in Year "C" study electronics switching in detail. Basic computers and computer programming are also studied. The Third Year student also studies micro-wave, direct distance dialing, cross-bar switching, data transmission and other courses on modern communications systems.

Grads of Telecommunication Technology can look for careers with nearly any major Telecommunications company, such as A.G.T., Northern Electric, Automatic Electric and Bell Telephone. Since there have been no grads as yet, salaries are unknown, except that this year's graduating class have been offered over $500 a month.





BRING ON THE WHITE KNIGHT!

HEAVY DUTY "WHAT"?

In the north-east end of the Institute there are two classes of Heavy Duty Technicians who use this large shop as a training ground. What they do in this shop and why is the technician not just a mechanic are the reasons for this report.

First of all "Heavy Duty" is short for Heavy Duty Equipment Technology not Heavy Duty Mechanic as many people assume.

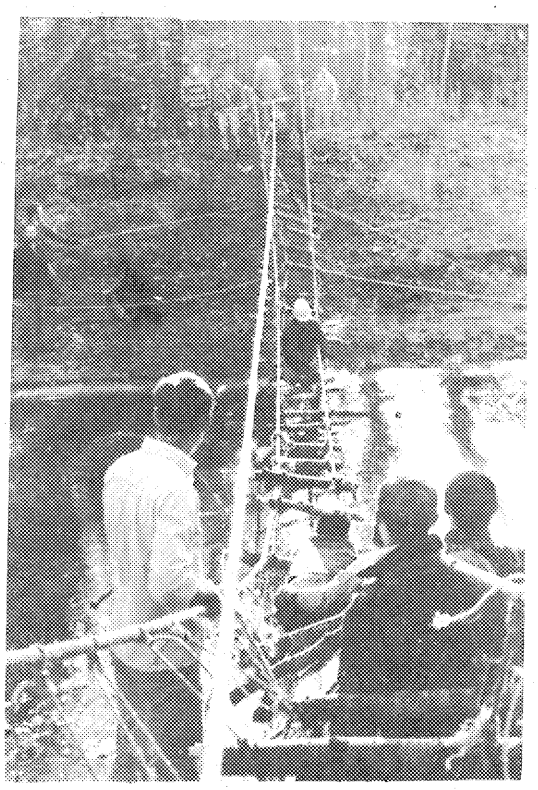
Our course includes the apprenticeship technical training and a firm foundation in math and science while in the second year. The course is more of an engineering program. Some of the courses are electricity, thermodynamics, hydraulics, fuel and lubricants, drafting, and some advanced shopwork.

The second year is the one that separates the technicians from the mechanics as the theory is extremely detailed and very extensive.

Upon completion of the course the student receives a diploma and may enter the trade as an apprentice. After serving two years to gain trade experience, he may qualify for his Journeyman's Certificate of Proficiency without further technical training. After several of his Journeyman's papers are acquired he may proceed to work his way up to Foreman or Supervisor. The successful student could also choose to further his education by becoming a mechanical engineer or a more qualified technician. From this position he could become a Service training technician, an engineer, or choose to come back to the Institute as an instructor.

This is a very rewarding course to the person who is fascinated by mechanics but would not like to remain a mechanic.

We wear black felt jackets with Heavy Duty on the front. Stop us and we will be glad to explain any other questions you may have.



CIVIL PARTICIPATE IN A

BRIDGE BUILDING CONTEST

CIVIL TECH GRADS RECOGNIZED BY U of A

The Civil Engineering technician is a semi-professional man, who acts as liaison between the design engineer and the builder. In this capacity the civil technician is employed in construction industry as: surveyors, draftsman, estimators, inspectors, superintendents and assistant to design engineers.

To accomplish a proficiency in these prospective fields the civil technician enters a two or three-year program at the Northern Alberta Institute of Technology. During the two years the civil technician is introduced to all phases of civil engineering technology. His courses include Math, Physics, English, Statics, Strength of Materials, Drafting, Soils, Surveying Highways, Municipal, Hydraulics and Wood, Steel and Concrete design. These courses are packed into six ten-week quarters of three hundred hours each, with final exams at the end of each quarter. With these basics the Civil Technician is ready to enter the construction field in whatever aspect that interests him.

The field of Civil Technology is not a new one, although it is only in its third year of operation at the Institute. This year's graduating class will enter the engineering and construction fields with the valuable information attained by two previous graduating classes. This information will be valuable in letting them know what will be expected of them by their prospective employers and what they will expect of their employers.

The job opportunities offered a Civil graduate are unlimited, as it is estimated that the number of Civil Technology graduates will never equal the number required by industry. As a result of this, the Civil graduate is offered a starting salary of between $400 and $450 dollars per month. This year the Provincial Government is offering a bursary of $50 to $100 a month to students in Civil Technology, who will work for them for one year after graduation.

The fall of 1967 will mark a milestone in the Civil Technology section, as it will be the first time that our courses will be recognized by the University of Alberta. A graduate of Civil Technology will be able to enter into second year University, upon the recommendation of the N.A.I.T. course and upon completion of additional courses in Mathematics and Mechanics.

ARCHITECTURAL TECHNOLOGY —

During the past two decades we have witnessed a pace in the building industry which has never before been approached in the history of man. Most of Canada, especially Alberta, is among the vanguard. A vigorous and challenging new architecture has evolved from a multitude of new construction methods and a growing need for buildings of all types. It has become an industry of consuming interest to all those engaged in it.

The primary objective of the three-year course in Architectural Technology is to train students to become highly skilled technical assistants to the professional architects. Upon graduation, the student will be a skilled architectural draftsman with well developed abilities in freehand drawing, sketching, and illustrating techniques. He will be fully able to detail structures and be competent in producing thorough working drawings. He will be sufficiently conversant with construction problems, materials and methods, so that he can, with experience, perform on-site inspections and supervision of work in progress as the agent of the architect.

This training will by no means restrict the graduates field of employment to the architectural office; rather, it prepares him for a wide variety of positions in the construction industry.

Employment opportunities exist in a variety of phases of the construction industry. They might include: Architects' offices, construction companies, town and district planning departments, Central Mortgage and Housing Corporation, civic building inspectors offices, drafting companies, trailer or home manufacturing companies, and building materials companies.

Generally, condition of work is exceptionally good. Offices are spacious and well lighted. Work is regular and steady, although the industry is characterized by occasional "rush" and "slow" periods. Consequently, a person engaged in this work may find that the pressure of work is very low at times. He will at other times be working long hours under high pressure. The usual working week is 40 hours.

Beginning salaries average from $300 to $350 per month, while salaries for experienced personnel vary from $450 upwards.

The fees for each of the three years of the course is $54.00. In addition, a registration fee of $5.00 is required each year at the time of registration.

Drafting instruments, supplies and text books for the first year will cost approximately $140.00 and for the second year $90.00 and for the third year $60.00.

The objective of the course is the training of architectural technicians. A diploma will be received upon graduation from the Institute.

This course is NOT designed to produce registered architects.

Even though a route does exist whereby a graduate can, by serving articles and writing professional examinations attain registration, this route is NOT recommended. Registration is properly attained by attending one of the courses offered at the University School of Architecture.

The course provides a practical background through the exercise of constructional methods in the shop, and an extensive study of the materials of construction.

Skills, knowledge and aesthetic abilities, are of pre-eminent importance. They are developed in freehand drawing and illustration, in mechanical drawing, and in general artistic and architectural design courses. Perspective drawings and renderings, and presentation drawings are made in various black and white and coloured media. Models of proposed buildings and design projects are constructed. Numerous design projects in two and three dimensions, employing many coloring techniques are completed.

Technical studies are made of strength of materials and structural design of buildings. Mechanical, sanitary, and electrical systems of buildings are studied. Working drawings of several buildings are produced and printed.

To provide the academic tools necessary to completely accomplish the preceding work, studies are made in relevant areas of English, Physics and Mathematics.

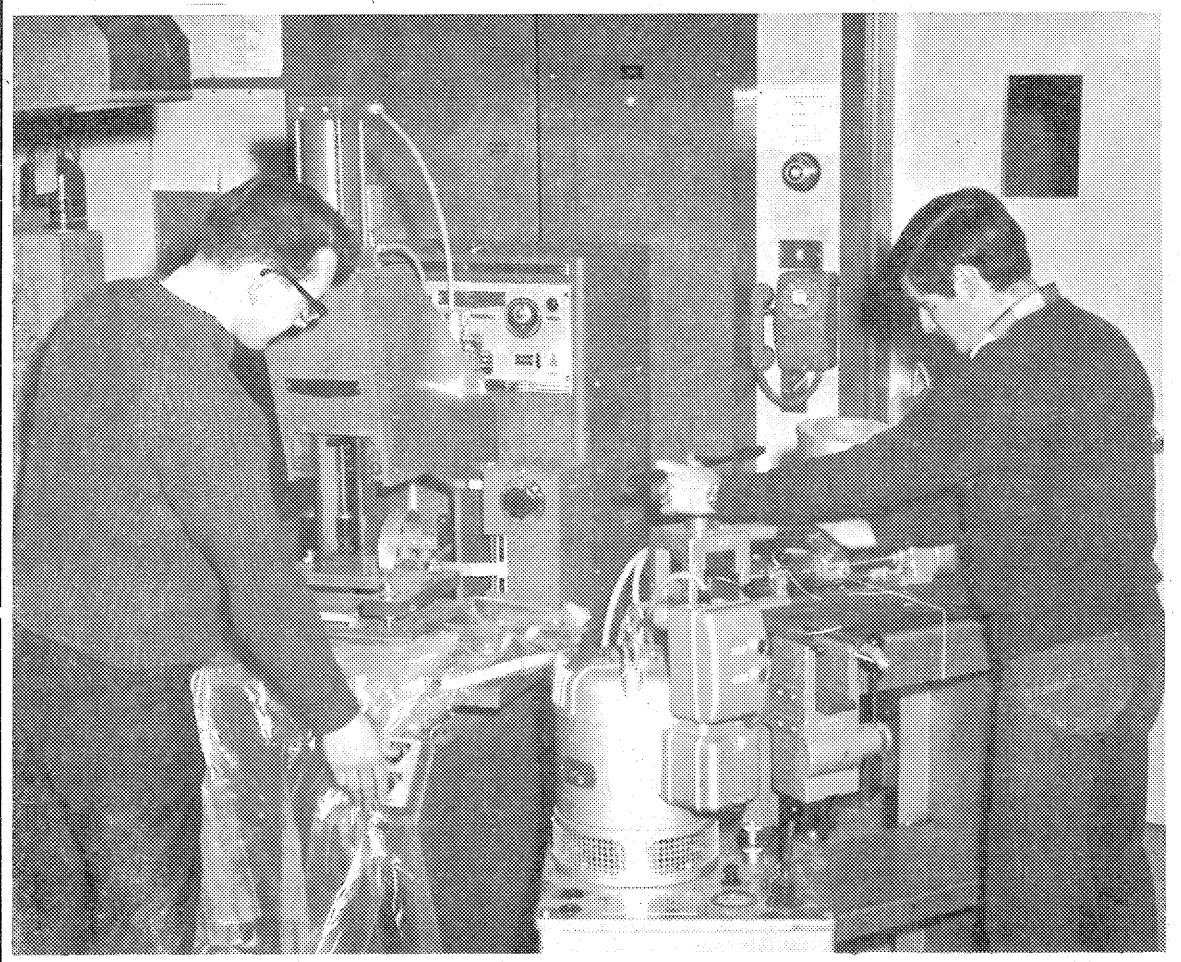
Examples of the work done by the present architectural students will be displayed during Open House.

Of particular interest to both prospective students and the general public will be the model of the N.A.I.T. campus built by the year "c" students. This model features a new proposed addition to the existing complex. The addition was designed and constructed solely by the students as a joint project in their design and presentation techniques courses. The model, along with other examples of student work, will be on display in Room E 205.

In addition to the regular three-year course in Architectural Technology a special program has been set up whereby Grade XII students with high academic standards may complete the course in one extended term of 10 months duration and one regular course of 8 months. Students admitted to this program should be prepared for a more intensified course of studies.

To gain entry into the accelerated program, students must have a minimum of 100 Alberta High School credits or equivalent with at least a "B" standing in Math 30 or 32, Physics 30 or 32 and credit in English 30 or 33 with a minimum overall average of 55%.

For further information as to courses and registration, prospective students may contact the Registrar.



PLASTICS — UNIQUE IN NORTH AMERICA

Consider, if you will, attempting to pass a single day without utilizing plastics in one manner or another. It would be next to impossible. Your day is a fabulous maze of these mystic and wonderful chemically derived materials.

The world of plastics is a wide and rapidly expanding one and the need for technicians is just as large. The two-year course offered at N.A.I.T. in plastics is the only one of its kind in North America.

It provides a thorough theoretical background of both thermosetting and thermoplastic materials as well as an intensive study of the chemistry of plastics and of production and manufacturing techniques. A great deal of time is also devoted to a detailed analysis of the major plastics utilized in industry. This takes in physical and chemical properties, identification, inspection and testing methods of each type. The balance of the course is comprised of Mathematics, Strength of Materials, Physics, Drafting and Destructive Testing.

The Graduate is a highly qualified technician capable of handling any one of a multitude of positions in this unlimited field.

Open House Display

The Plastics section is attempting to set up a variety of displays on the techniques involved in the manufacture and forming of plastic articles, primarily through the application of heat and pressure. Also open to the public will be a practical demonstration on the actual demonstration of the raw plastics by chemical reaction. An interesting display is to be set up illustrating a few of the odd properties of some plastics materials.

This exhibit has to be designed in an attempt to give prospective students a brief preview of what is entailed in the study of plastics and it is a must to see. Students will be on hand to answer any questions that viewers may have on either the topic of plastics or the course itself.

Survey Technology

Today's advances in science and technology are affecting every profession the world over. New equipment and methods are constantly being introduced and employed. Many of these advances are affecting the surveying profession. It is an established fact that the surveyor is irreplacable, and the demand for qualified personnel is steadily increasing.

The Survey Technology Division at N.A.I.T. believes that a broad basic knowledge of surveying is necessary to cope with the modern changes constantly being introduced into all fields of survey. The Division also believes that an extensive field program is also essential to produce an eficient graduate.

The basic knowledge required to cope with these changes in Surveying lies in the fields of Mathematics, Physics, Photogrammetry, Geology and Astronomy. These courses are also the curriculum of the Alberta Land Surveyors' and the Dominion Land Surveyors' program. These courses prepare the student to write the professional examinations of these organizations. Successful completion of these courses at N.A.I.T. and a three-year period of articling will give the candidate professional status. It may well be noted that the Survey Technology program is the only one at N.A.I.T. from which a professional status can be obtained without further training.

The course in Mathematics is perhaps the most essential course in Surveying and consequently a most rigid and extensive Mathematics course is followed.

The Physics programme provides a good basis for the two man applications of physics in surveying: light and electricity.

Courses in Astronomy and Geology prepare the student for his professional examinations as well as giving him the necessary knowledge of these subjects which he must utilize in surveying.

Photogrammetry is constantly playing a more important role in surveying; to provide the student with a practical and theoretical knowledge of the principles and their application in surveying.

Drafting is also an essential course of surveying and extensive courses on this subject are included in the Survey programme. Following the course in which the basic drafting practices are taught, the student becomes familiar with such topics as topographic drafting, engineering drafting, and legal survey drafting. Descriptive geometry is also included. This provides the student with an understanding of the principles of mine surveying, construction surveying and also geological surveying.

A course in technical writing, including the writing of reports, business letters and an oral dissertation of a report provides the necessary background in English.

The survey programme includes an intensive field course conducted with the use of modern instruments and amplified by a thorough study of the theory of surveying.

Included in this field program is the use of various basic instruments, as well as the familiarization with such sophisticated instruments as the Geodimeter and the Tellurometer, which provide the most modern and efficient method of the measurement of distance. The field course includes all typical engineering survey problems being worked out under field conditions, then being computed and recorded in the drafting room. A related course in electronic computer programming is utilized to solve some of these practical field work problems. The field work is accomplished by field trips to various locations in the city as well as the country where typical survey problems are solved. This also provides the student with an opportunity to develop initiative and leadership in the solution of some of the problems.

In the theoretical component directly related to surveying the student becomes familiar with the following types of surveys: Engineering, land, topographic, hydrographic, highway and road construction, and exploratory and recconnaissance surveys. Courses in survey calculations enable the student to easily cope with the various problems related to the theory. A course in the principles of legal surveying supply the student with information on regulations.

The Survey Technology program at N.A.I.T. is most intense, accurate, modern and complete. Its product will be graduates of high calibre, thoroughly educated in the principles of surveying, thoroughly familiar with the instruments and their uses, and versatile in every aspect of surveying. He will be able to cope with any changes or advances in the field with a minimum of instruction. He will not only fill the demand for qualified personnel, but he will fill it well.

DRAFTING TECHNOLOGY

The technical demands of industry are increasing, changing and diversifying at an accelerating rate as we enter the last third of this century. It is quite probable that this trend will continue into the future and it is with this in mind that the curriculum of Drafting Technology was set. The Ciriculum has been designed to include only those courses that will enable the graduating Draftsman to cope with any problem he may encounter. A working understanding of mechanical, structural, architectural, and topographical drawing practice design are major objectives of the course.

A prime objective of the course is the basic understanding of modern construction techniques and shop practices. During the past few years new materials have brought about greater freedom in design and hence new methods of construction. The machine shop has also undergone basic changes during the past few years: Greater accuracy and new machining practices are available. The curriculum includes courses which discuss these and other new methods in shop, surveying and drafting.

Interesting experiments in electricity, heat, sound and light are part of the physics course. Construction shop consists of demonstrations, field trips and shop experience in the many systems and types of construction operations commonly performed in the machine shops. In surveying, actual field work involving leveling and traversing is carried out by the student.

Throughout the entire ciriculum the greatest percentage of time is spent on the drafting table covering the basic procedures in mechanical topographical, structural, architectural and electrical drafting.

Open House Display

One of today's most important drafting techniques is that of model building. By building a model to exact scale a draftsman can have at hand a three dimensional representation of a particular project, that is both cheap and easy to build. Lessons can be learned in the building of the model which can later be applied to the building of the actual structure.

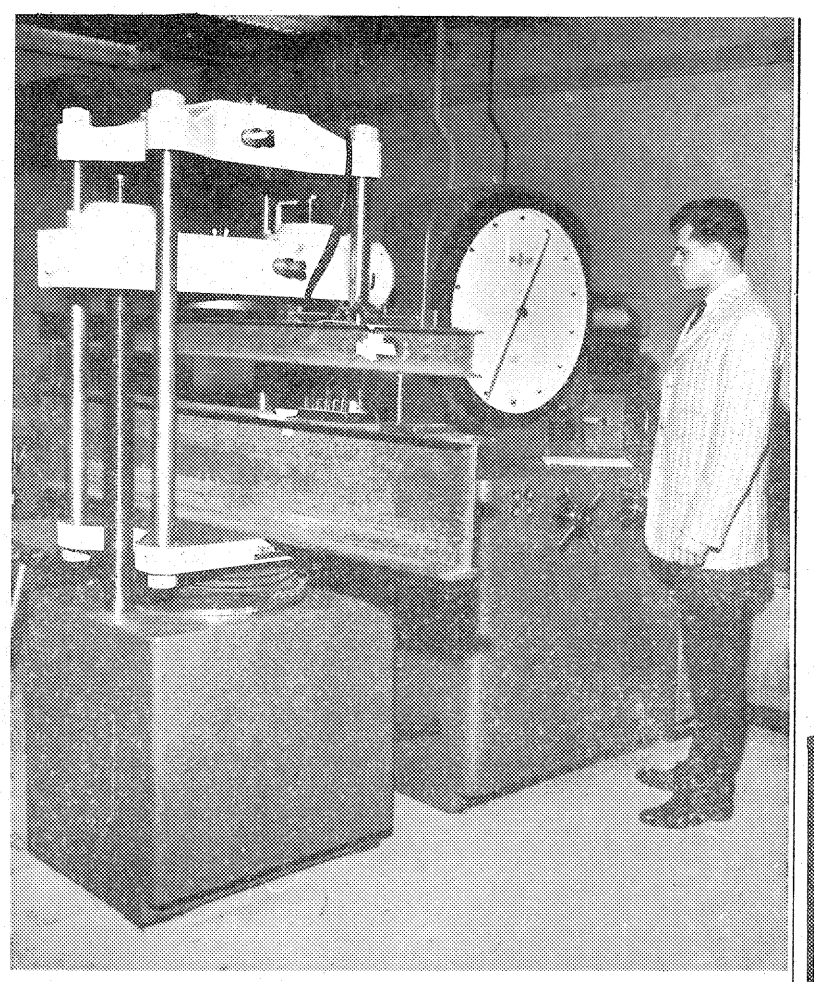
As it's "Open House" display Drafting Technology has prepared various fields of importance to the draftsman.

Perhaps the most important objective of the course is to turn out draftsmen who are well trained in the basics of drafting. An emphasis is therefore placed on such seemingly uncomplicated things as good dimensions, line-weight and composition in each assignment throughout the course. In general, the entire program provides an educational background of such a nature as to fit the ambitious individual for positions or responsibility.

The course of Drafting Technology is designed to supply the student with the required high degree of skill that is necessary to meet the present demand in industry.

Due to the various types of drafting encountered in the technical field, a working knowledge of mechanical, structural, architectural, and topographical drawing practices is instructed. Along with these basic subjects, the students receive practical training in surveying, and machine and construction shop techniques.

In the first year of drafting approximately 65% of the course involves laboratory experience. This experience is mainly in physics course. Construction, machine an array of various models with various applications. For example there are models such as the "Ski Boat" complete with controls and engine built to one sixth full size; a beer and spirits "Distillery" modelled after Corby's of Corbyville, Ontario; and "Industrial Kiln" modelled after the "Edcon" plant in Edmonton for making light weight aggregate to approximately one-twenty-fourth full size. There are many others, some of which have been designed by the students themselves; a "Recreation Centre" housing a separate gymnasium, curling rink and dance hall; a "Swimming Pool", completely enclosed and housing 1200 spectators for the olympic-sized pool, a $30,000 "Residential House". As a feature of the display are two model bridges. One, the Thaketa Bridge built in Rangoon, 933 feet long, made 1/20th full size, with a centre drawbridge-section 121 feet long. The second is an HO scaled CN bridge over the Big Berland river in Jasper National Park complete with a working model train which will guide visitors through the display.



ONE OF THE MANY TESTING MACHINES ON DISPLAY AT N.A.I.T.

MATERIALS TECHNOLOGY — Producing Technicians of a High Calibre

This course is designed to produce technicians of a high calibre to work in research, inspection, and selection and application of engineering materials. The first four quarters are designed to give the student a broad education in the engineering sciences, the subjects varying from modern physics to welding. In the last two quarters, intensified courses in testing, inspection, and properties of engineering materials are taken.

Beginning this fall, the second year students will be able to specialize in either Materials Testing Technology or Metallurgical Technology. The metallurgical technician will spend more time dealing with metallurgical theory and laboratory assignments. Metallograph (the study of metal structure and fractures), x-ray diffraction, and orystallography will be increased. The testing of construction materials will be deleted (soils, asphalt, and concrete).

When the students graduate, they will probably work in the following fields:

Research Assistant, Atomic Energy Commission

Supervisor of Heat Treatment, Steel Manufacturer

Metallurgical Assistant, Tar Sand Operation

Corrosion Inspector, Petro-Chemical Plant.

Extensive Course Coverage

The Materials student takes a wide variety of courses. A complete mechanical testing laboratory covers destructive testing which includes Tensite, Fatigue, Charpy Izod Impact, Torsion, Rockwell, Brinell and Tukon Hardness tests as well as microscopic analysis and heat treatment of metals. Nondestructive testing covers the use of X-ray, gamma ray (isotope), magnetic particle, dye-penetrants, and ultrasonic equipment. The study of Physical Metallurgy includes corrosion equilibrum diagrams, solutions, phase changes, and diffusion. Theory is supplemented by experimentation and laboratory work including specimen preparation and the use of the microscope and metallograph. The study of non-metallics covers subjects such as properties, structure, selection and uses of nonmetallic engineering materials such as wood, cement, soils, plastics and ceramics.

Other courses the student takes are Physics, Math, Statics, Strength of Materials, Dynamics, Chemistry, English and some instruction in Welding, Photography, Drafting, and Machine Shop.

In the sixth quarter the students will be required to use their acquired knowledge and solve a specific problem from industry as a technical project.

Due to the fact that Materials Technology is unique in Canada, no text books have been written for specific courses. However, excellent reference texts are selected to provide the student with abundant sources of information.

Chemical Technology

Have you ever passed the oil refineries, the chemical plants, or the science departments of a university and wondered: What do they do in there? Have you ever seen a synthetic fabric, a plastic cup, a bag of fertilizer and wondered: How do they make that? Obtaining answers to these questions can result in an interesting vocation. Pursuing a chemical vocation is not easy but the rewards are well worth the effort.

The chemical industry is increasing in importance, particularly in Alberta because of the tremendous strides that are being made in the petroleum and natural gas industries. The chemical technician can apply his knowledge to a variety of fields. The greatest need for his services is in process or quality control of a variety of chemical products. His knowledge is also utilized in such places as the universities, Research Councils and the research departments in private industry. Because of the wide field that is open to the chemical technician, his knowledge must be broad.

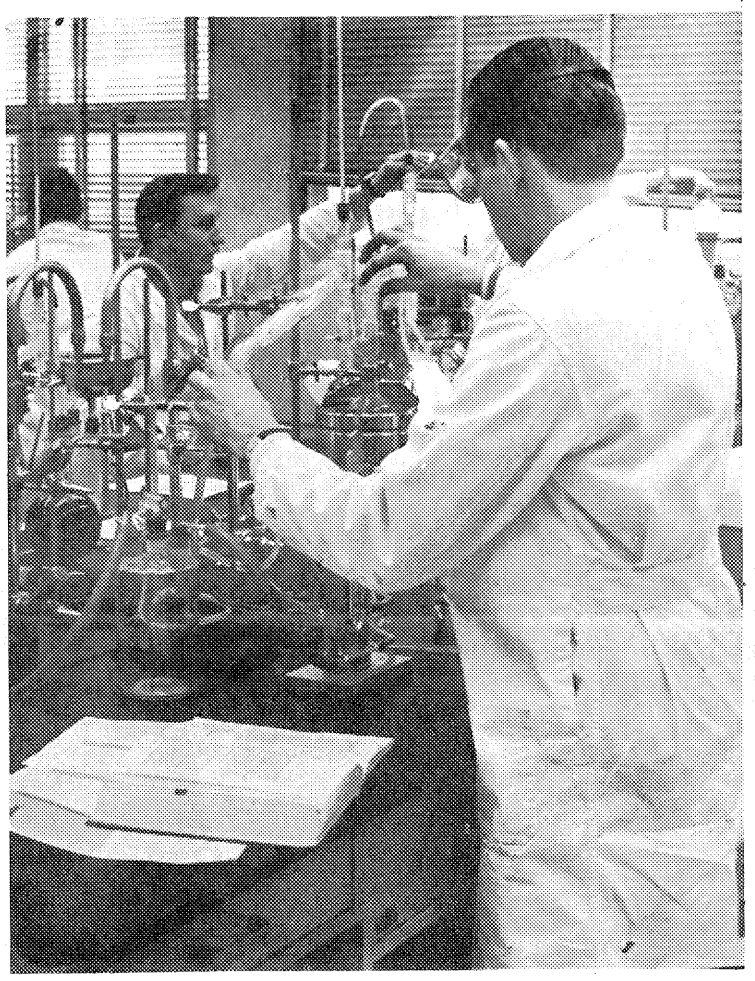
To qualify for a diploma, a student must successfully complete two years in the Chemical Technology program. Since the main industry in Western Canada involves the manipulation of organic compounds, the two years are naturally slanted in this way.

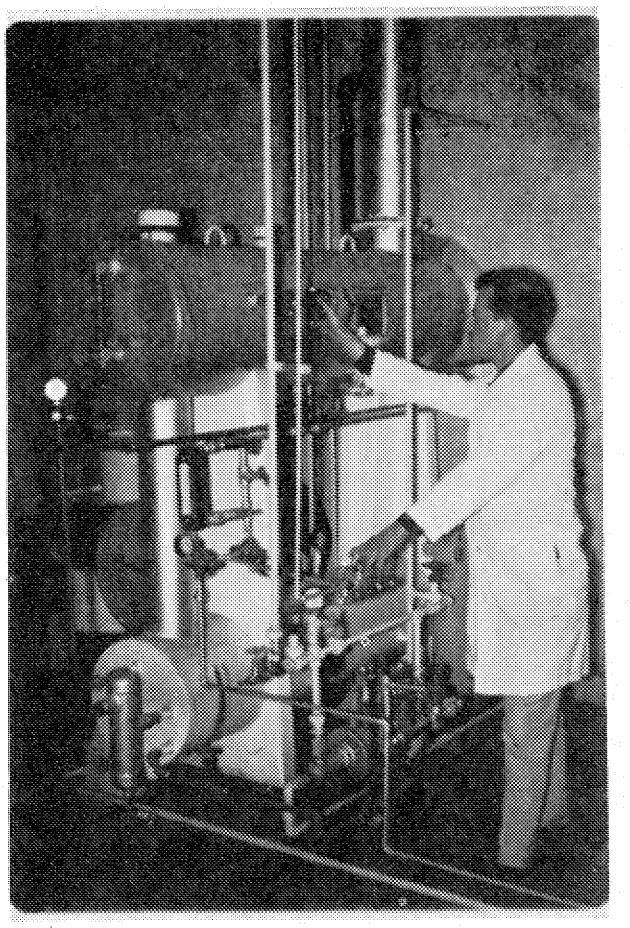
Theory of some subjects such as polymerization of plastics is covered in detail as well as the actual production of pharmaceuticals such as aspirin and sulfa drugs. With the exception of the universities, N.A.I.T. is the only institute that instructs in the use of high vacuum equipment. We can prepare compounds of high purity at 111/000,000 atmospheric pressure working with temperatures as low as —320° F. A course in scientific glass blowing can be taken as an option. We are also instructed in basic subjects such as advanced mathematics, physics and even English in the form of written and oral communication.

Over $100,000 In Equipment

As indicated by the surroundings, N.A.I.T. is new, and therefore educational aids such as laboratory equipment and library reference material are not as plentiful as we would like them to be but time will see our needs fulfilled. The equipment in the instrumental analysis laboratory has already attained a value of about $100,000; the most expensive pieces of machinery being the Infra-red Spectrophotometer a Saschemetograph and an atomic absorption spectrophotometer.

The greatest asset of the chemical technician is his practical knowledge of chemistry which enables him to go to private industry with very little time wasted for on-the-job training. Already some of the graduating students have attractive positions with many companies ranging from applied research to food analysis. Again this year, we expect that there will be more jobs available than there are graduating students.





GAS TECHNOLOGY

The natural gas industry is one of the largest and fastest growing in Alberta. Each year the production and sale of natural gas increases considerably, with the future holding nothing but promise. A large number of trained personnel are needed each year to meet the engineering and technical demands of the industry.

The purpose of the Gas Technology course is to train technologists for careers in the natural gas industry. Almost all graduates from the course begin work as engineering technologists in the engineering offices of the oil and gas companies of Alberta. The acceptance of the graduates in industry and the validity of the course is easily verified by the fact that each year there are more jobs available than the graduates can fill, and they enjoy the highest average starting salary of all graduates from the school.

The work of the graduates as an engineering technologist is varied. He may assist in gas plant design, revision, or operation, in economic studies, in reservoir studies, or in field operations such as well testing, and many other engineering projects and duties. The course is designed to produce gas technicians who will be of maximum value to their employers. The gas technologist fills a large gap between the graduate engineer and the skilled tradesman.

The Gas Technology course begins with a review of basic mathematics, physics, chemistry, and English. The specialized study in the field of natural gas begins with the basics of geology, reservoir mechanics, and drilling operations. Later in the first year, statics and dynamics, formal report writing, surveying, and organic chemistry are studied. The major gas course deals with design and operation of wellsite equipment.

The second year includes courses in power plant engineering, computer programming, instrumentation, strength of materials, and more advanced mathematics and chemistry. The gas courses include design and operation of basic gas processing equipment, a study of the operation of a complete gas processing plant, and a course in the analysis of natural gas. Later in the second year, advanced courses in formal report writing, industrial chemistry, gas instrumentation, gas processing equipment, and a basic course in electronics are studied. Finally, the education of the gas technologist is rounded off with further courses in gas plant operations, materials of construction, formal report writing, industrial chemistry, thermodynamics, and industrial relations.

During the two-year training period, approximately 35% of the Gas Technology student's time is spent in the laboratory and in field work. Practical experiments are carried out in chemical analysis and reactions, physics, electricity and electronics, instrumentation, and thermodynamics. Practical courses in drafting, surveying, and data processing are studied. The gas laboratory periods are spent studying gas flow rates, wellsite equipment, gas analysis, and natural gas research projects.

During "Open House", the Gas Technology students plan to display gas analysis apparatus, and a working model of typical natural gas processing equipment as used in industry. The students will be available at all times during Open House to explain the purpose and operation of the apparatus and to answer any questions about the display or the Gas Technology course.

NUGGET

EDITOR ..... J. C. GANTNER
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Features Editor ..... Leigh Ferguson
Advertising Manager ..... Les Tomlin
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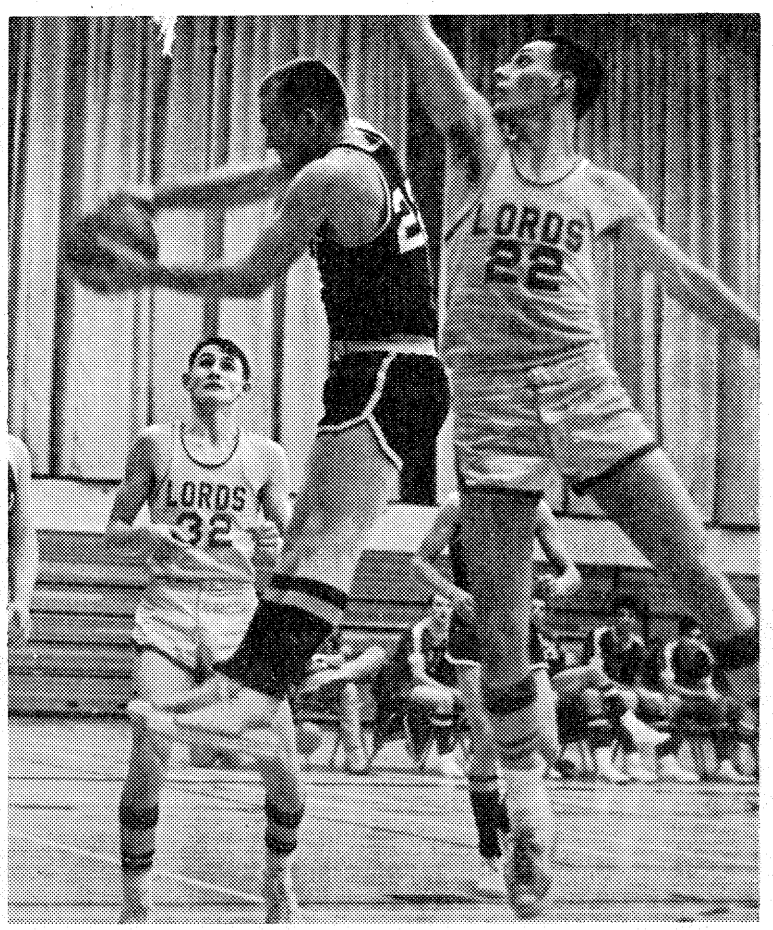


STUDENT SERVICES

ATHLETICS PROGRAM

SERVICE PROGRAM

All first year students enrolled in the Business and Vocational Technology courses are required to take two hours of physical education per week. This course is the Physical Education Service Program.

The philosophy of the Institute and the Physical Education Dept. is that our students must be prepared to successfully cope with a world of increasing leisure time and automation. In order to do this we are presenting a program which will provide students with the necessary skills, knowledge and appreciation to constructively fill their abundant future leisure time. We hope to instill in them the fact that continuous recreation is required to maintain physical fitness in a world of high pressure and competition. If we can accomplish this then we feel that we will be contributing something of inestimable value in the students' quest for a happy, healthful life.

There are four major hopes for the future of the program. Firstly aquatics is a prime requisite for a program of our type thus the need for a pool. We hope to have one in the not too distant future. Secondly it is hoped an adaptive program may be included. It will be through this method only that we will be able to meet the needs of all students. If at all possible, the program will be corrective in nature as well as recreational.

Physical education is a vital and unique part of the sum total of life experiences which make man as we know him. The Department's philosophy is not elaborate but it does plainly state how universally important it feels physical education is in developing the total personality and in maintaining our democratic way of life.

INTER-SCHOOL ATHLETICS

Students at the Northern Alberta Institute of Technology can avail themselves either as spectator or player to a fairly diversified program of athletics. Competition is carried out within the Western Inter-College Conference, a conference formed several years ago to meet the need for competition at the Junior College level. The W.I.C.C. encompasses a large number of institutions and geographically represents almost all of the Province of Alberta. Member schools of the Western Inter- College Conference are presently — Lethbridge Junior College; Southern Alberta Institute of Technology; Mount Royal Junior College; The University of Calgary; Olds Agricultural and Vocational College; Red Deer Junior College; Camrose Lutheran College and N.A.I.T. Activities offered in the Conference include Cross-Country; Golf; Volleyball; Curling; Basketball; Badminton; Bowling; Wrestling; Hockey and in the near future a fall sport such as Rugger or Soccer. Most of these activities are participated in by both men and women.

In the short time of its existence N.A.I.T. has enjoyed a great deal of athletic success and is presently the holder of the Lethbridge Herald Trophy which represents overall W.I.C.C. athletic supremacy.

INTRAMURAL PROGRAM

The Intramural Program at the Northern Alberta Institute of Technology is a sports recreational program that presents each student the opportunity to compete in physical activity. Possibly the motto "A sport for everyone and everyone in a sport" would be a more expressive way of indicating the above statement. N.A.I.T. attempts to present a variety of activities so that the program will encourage participation from each student in at least one activity.

We at N.A.I.T. feel that Intramurals are for the students and therefore should be run by the students. We have an Intramural Board with membership compiled of first and second year students, two from each technology. A member of the Physical Education staff acts as staff advisor to the Board. This Board is directly responsible for the smooth operation of Intramurals.

We hope you will take this opportunity while you are visiting us at N.A.I.T. to look over and inquire about our intramural program. We plan to have displays set up so that you may get a better insight into the program.

STUDENT PLACEMENT OFFICE

This office is operated by Department of Manpower and Immigration personnel, who provide an organized placement activity. This central handling of the placement function is designed to keep order in the campus recruiting program.

Service to Students

The Placement Office exists primarily to serve the student and can help them in the following ways:

By providing counsel and guidance to help them with their career decisions:
By providing facilities for students to make employer contacts;
By maintaing an ample supply of reading materials on career and employing organization;
By working with other advisory services on the campus which complement this service to the student;

Service to Employers

Extensive contacts with the employers are essential as well as being vital to the accomplishments of the Placement Officer's duties and responsibilities to the students. There are advantages to the employer in that the Student Placement Office can aid the employer:

By making their needs and operations known to the students;
By enabling them to visit and interview qualified applicants and to make contact with instructors and institute personnel;
By keeping them informed of changes in educational programs.

Service to the Institute

The Student Placement Office is not limited to the confines of the campus—its functions reach beyond the academic environment. In a sense, it is the crossroads where the traffic of students meets that of the employers. Meeting here too, are the faculty, the administrative staff, and the many others who come to exchange and obtain information.

Basic Functions of the Student Placement Office

Students should know what they have to offer, have adequate information on the overall state of the labor market and have available knowledge of specific requirements of individual companies. Companies need be appraised of the kinds, numbers, and quality of students in the institute. Student and employer must be available to each other at appropriate times, and the premises must be adequate to accommodate orderly discussions between the parties. The major activity of the Placement Office centers on providing these conditions.

Before the recruiting season gets underway, a considerable amount of planning and scheduling by placement staff is needed. Company interviewing dates must be reserved, company needs established, informative materials from companies obtained and displayed. Early student registrations and interviews with Placement Officers are essential since here, if anywhere, the officer can get to grips with each individual's potentialities and problems. The officer also arranges and allocates space on the recruiting calendar, based on company needs and supporting written materials and student applications.

The Student Placement Office located at E1123, invites and welcomes enquiries from prospective employers, students, and others who wish to discuss or make use of the services provided.

GUIDANCE AND COUNSELLING

N.A.I.T. GUIDANCE AND COUNSELLING SERVICES

N.A.I.T. Guidance and Counselling Service was established in order to assist students to profit by their education here at the Institute. Various factors that may interfere with the processes of learning are dealt with.

In order to assist the student in self-realization, maximization of education opportunity and acquiring information about his occupational goal the following services are made available:

1. A compulsory program for all prospective students. This information can be of considerable assistance in making an occupational choice.
2. To provide an information service to students concerning occupations, attitudes and other educational opportunities.
3. Assessment and identification of various intellectual, personality and/or socialogical problems which may hamper the student's ability to learn.
4. Counselling (therapeutic) services to students who require pre-discharge interviews and re-assessment of goals outside of N.A.I.T., or re-allocation of students in other courses offered here.
5. Establish lines of communication with outside agencies for referrals and information.
6. Provide assistance to staff in educational, psychological and guidance matters.

The testing program is presently only open to those students who have made application to the Institute for day courses.

Offices are located in Room T112 in the Tower Building. The phone number is 479-7890. Services are available between the hours of 8:15 p.m. and 4:45 p.m. during the winter months, and between the hours of 8:00 a.m. and 4:30 p.m. during the summer.

McNALLY LIBRARY

In the immense complex of N.A.I.T. there is one room that the only key needed to open it is the keen desire of the student to learn the truth and further his knowledge.

The Library shares with the school in the education of its students. The school teaches them to read intelligently, the library supplies them with the reading material.

The Library 5 W's.

1. **WHO**—The McNally Library and staff, anxious to make research material available to all Institute members—student or staff.
2. **WHAT**— Approximately 20,000 volumes and 150 periodicals aimed to supply up-to-date reference material
3. **WHEN**—First used September, 1963 with an average daily attendance of 75 students and now in 1967, an attendance of 750 (ten times greater).
4. **WHERE**—"Believe it or not," the McNally Library is the hub of the wheel radiating outward to the Business, Vocational, Technologies and Apprenticeship sections. We are conceited enough to believe that the Institute could not run without us.
5. **WHY**—To extend a welcome invitation to all to enter our Open Door and make use of the material found in The Room.

At the risk of sounding quite pedantic the library is a storehouse of knowledge. It is the easy, rapid access to the world's best thoughts. It is for the distribution of mass media. Our books range from the serious technical factual title to the popular paper back thriller. Like the other schools, we too have our 3R's—Reference, Research, Relaxation. Idealistically, in the words of the late Sir Winston Churchill, we try to supply "the tools to finish the job" of helping students further on their road to their prospective goals.

•It is rather difficult to put down in black and white, the aims, objectives and services of a library in a short newspaper article. Like Koko in the Mikado, we "have a little list," and like his partner, Pooh-Bah, "our object all sublime we shall achieve in time." For instance, on this list some of the other services include:

providing a quiet study atmosphere which often entails "baby-sitting" over 200 students.

—maintaining a "lost and found" department

—coming to the rescue with such items as scissors, staples, paper pnnch and other stationery equipment

—collecting fines—which do act as a deterrent to tardy students who are withholding the privilage of equal distribution from their fellow students.

So,—happy reading to you and if you don't know the answer to your problem, "ask your Librarian." She may not know either, but at least she can direct you to where to find it.

HEALTH SERVICE

Health services are designed to maintain and improve the health of employees and students so that each individual may function as a productive and self respecting happy worker for a maximum period of time.

Health programs are designed to fit employees and students into jobs that are within their physical and mental capabilities, to protect them against environmental hazards, and to provide emergency treatment and rehabilitation services when they become sick or injured on the job.

Personnel Involved in Health Services

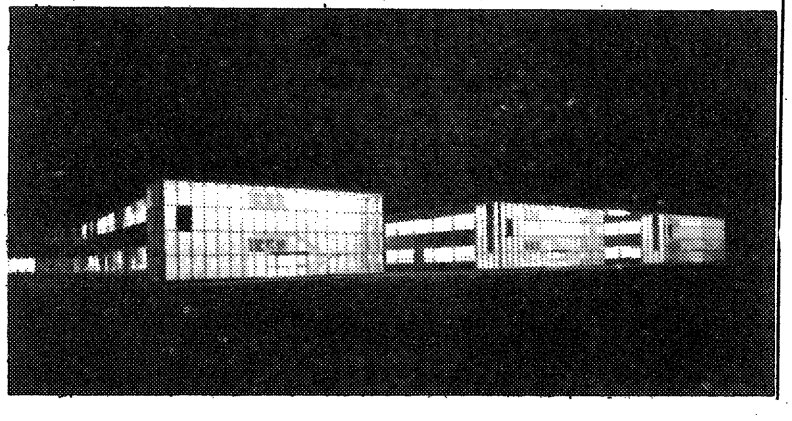
1. **Public Health Nurse**—a qualified public health nurse who is responsible for the operation and administration of the health service, including the public health program.
2. **Nurse**—a qualified registered nurse who is responsible for minor treatment and emergency first aid services.
3. **Stenographer - Technician** — acts as receptionist as well as in the capacity of Nursing Assistant. Assists with emergency first aid as required.
4. **First Aid Auxiliary Workers**— a number of qualified St. John Ambulance First-aiders prepared to render immediate temporary assistance to an individual suffering from an accident or sudden illness pending the arrival of the nurse.
5. **Consultant**—a Physician with industrial experience appointed to advise and supervise the overall Health Service.

Specific Health Service Offered

1. The Health Service Office, Room Tower 110, telephone 477-3277 or grey phone 283, is open Monday through Friday from 8:00 a.m. to 5:00 p.m.
2. The Health Service is provided free of charge.
3. Minor on-th-job illnesses or injuries will be treated as required and as recommended by the Medical Consultant.
4. Health Counselling of employees and students will be offered when requested.
5. Individuals requiring assistance at other times during the day should not hesitate to call the Nurse at 477-3277 or grey phone 283.
6. First Aid coverage is provided from 7:00 - 10:00 p.m. Monday through Thursday in the Industrial Wing A170.

Health Insurance Programs

1. Industrial Students are covered by Workmen's Compensation Insurance in the event of accidents while on the job.
2. Industrial students are covered by Students' Accident Insurance in the event of accident while participating in sports or Gymnastic activities.
3. Technology and Business Education students are covered by Students' Accident Insurance in the event of accident while on the job or during sports activity.
4. Alberta Vocational Training Students' receive financial assistance for transportation from the Dept. of Education, for injury or illness occurring while on the job.



THE REGISTRAR'S DEPARTMENT

This Department is concerned with the distribution of information to the High Schools throughout the Province, revising calendar information and issuing it each year as early as possible so that prospective students and counsellors have all the information possible.

All applications are submitted to the Department so that they might be screened. Each course has a different academic requirement, some are involved in age requirements or special skills. In instances where the appliacant is not taking the correct subjects these people are notified to this effect and suggestions are made as to where the applicant may obtain this, perhaps insufficient time to be considered that year. As the final marks for the High School year are sent out to the students by the Department of Education, transcripts must be forwarded to us for final selection purposes so that all applicants can be notified by the middle of August of their acceptance or rejection, and the date of commencement of their classes.

Registration for the year 1967-68 will commence August 29th and will no doubt be a hectic event. This year we have more students enrolling than any previous year. On August 29th and the 31st we will have over 2,000 students registering for the first time. The following week we will have well over 1,000 students involved in their final year of studies at this Institute.

Gently, but firmly we remove their tuition fees from them and orientate them to their studies, books, classrooms, and instructors.

At this point we are involved in the academic records of the students throughout the academic year and, of course, we have the sad project of helping people who have academic difficulties, people who withdraw, and others who are not interested in continuing their studies and leave us prior to Christmas. For the student who applies, is accepted, and has the initiative to work at a steady pace; no doubt, these people will succeed; and we wish them every success in their endeavors at this Institute. To those who do not have this initiative even though they may have the academic ability, we find that in many instances they have to learn the hard way, that it requires additional instruction to become successful. Quite a number of these students return to us at a later date to do the type of work that will make them successful.

To the visitors of this Institute we would say that at any time you require information, counselling or a personal interview, do not hesitate to contact us.

THE ADULT EXTENSION AND EVENING DIVISION AT N.A.I.T.

The emphasis today is on continuing education and one can no longer be content with the body of knowledge he or she originally acquired. Society, with all its complexities, demands more education. The adult of today must compete, and in fact, demand opportunities for self-improvement.

The Institute, in recognizing the needs of the community has arranged programs for those wishing to continue their education, by providing evening courses, short intensive day courses, for industry, and summer school courses. The program has been organized with the following broad objectives in mind.

1. To assist those already engaged in trade or occupation by providing them with instruction in the technical and theoretical aspects of their work; to bring such students up to date with the latest information and practices in their own particular ideas.
2. To provide sufficient basic instruction to those who wish to change to a new occupation or to prepare for such a possible change.

In addition to the regular evening class programmes, the Institute will offer courses for students enrolled in the Society of Professional Engineers, and for students enrolled in the Association of Engineering.

Students who are interested in obtaining credit towards a diploma are urged to check the calendar thoroughly for the prerequisites to enter such courses and consult with the Institute in planning their program.

Other courses may be organized on request provided we have the facilities and the instructors, and a sufficient number of applications are received to make the course worthwhile. Interested groups should communicate directly with the Director of the Extension Division.

With the opening of the Northern Alberta Institute of Technology in 1962 a limited number of courses were offered, but in 1966-67 over 350 Extension Courses will have been offered with a total registration in the region of 5,000 applicants. It is estimated that in 1967-68 there will be approximately 6,000 registered applicants and an increase in the number of courses offered.

Extension Division calendars for the school year 1967-68 will be available in June 1967.

For further information and application forms, write:

NORTHERN ALBERTA INSTITUTE OF TECHNOLOGY
Evening Course Division
11762 - 106 Street
Edmonton, Alberta

or telephone

Extension Division — 479-3513
Evening Course Information — 477-1053.

N A I T S A

PAT CLARKE

President, Students' Association

On behalf of the students of the Northern Alberta Institute of Technology I wish to extend a sincere welcome. Our annual "Open House" means a great deal to us . . . it's our chance to show you our multi-million dollar educational complex, the largest Institute of its kind in Canada.

Needless to say we are proud of our Institute and whether you are here simply to look over this giant complex or to register in one of its many courses offered, we hope we can be of assistance to you. The displays arranged by the students are intended to give you an insight of the many programs.

Thank you for your visit.

J. Patrick Clarke,
President,
Students' Association.

NORTHTERN ALBERTA INSTITUTE OF TECHNOLOGY STUDENTS ASSOCIATION

N.A.I.T.S.A. PROVIDES MAXIMUM SERVICE

NAITSA's main purpose is to provide a means of communication among students and between the students and staff of N.A.I.T.

From the initial Freshmen Orientation Week activities, and throughout the year's endeavours, NAITSA WORKS TO ASSIST THE STUDENT ON CAMPUS.

Social Activities, such as the Welcome to Campus Bar-B-Q and Hootenany, and the Miss N.A.I.T. Queen Ball, provide a wide and varied choice of themes and areas in which students can let off steam. Because of a Provincial Government regulation, dances at N.A.I.T. (on campus) must be limited to one per month. Each dance held this past year has been a rewarding success to each of the sponsoring technologies.

The highlight of the scheduled dance calender of each year is the Queen's Ball, at which is crowned Miss N.A.I.T. This year's Miss N.A.I.T. is a charming blonde, Cecilia Halwa. Cecilia won out over seven other candidates in a week of fun and frolic. It is most unfortunate that the public does not get an opportunity to see the school spirit and enthusiasm shown during Queen Week on campus.

School spirit is most difficult to maintain in an institution of N.A.I.T.'s size. But through special activities and groups that come into the institute to entertain, as well as the NAITSA sponsored clubs, rewards made to those people who devote much of their already taxed time to NAITSA activities, are presented on Awards Night, (usually in April).

N.A.I.T. Radio is strictly an "on campus" radio station — complete in itself. NAITSA is proud of the excellent equipment obtained for the club. This equipment enables N.A.I.T. Radio to provide the students with a means of communication and enjoyment. N.A.I.T. Radio is a club whose membership is not restricted to any member of any technology. Each year more members are required, and anyone interested is urged to join or to inquire as to the club's operations.

The Northern Torch, N.A.I.T.'s Yearbook, is artistically designed to portray a reminiscent look back at the year's activities. The quality of this NAITSA sponsored publication, leaves little room for improvement. The yearbook offices are a constant hive of activity, but more students from a greater variety of technologies are needed.

The Nugget, N.A.I.T.'s newspaper, is NAITSA's prime medium of presenting information to students. The Nugget has shown dramatic growth, as in only four years it has grown from a ditto machined piece of paper to the present size and format. NAITSA's Nugget has drawn praise by many who have read it, not only in Canada but as far away as Moscow, U.S.S.R. (It is not because the paper has any leftist attitudes, but because a delegation of touring education officials from Russia were suitably impressed by the publication, that they asked to take copies of the Nugget back to Russia with them.)

STUDENT COUNCIL IN ACTION

ARETEAN SOCIETY — or Greek Girls

Not really . . . but the Aretean Society on our N.A.I.T. campus has adopted the Greek theme for their association. The Society gets its name from the Greek word "Aretean" meaning "all round excellence," which the Society Council felt fully described our purpose in starting such an organization.

PURPOSE:

The objectives of the Aretean Society are to form an organization:

1. To increase participation of women in the athletic programs of N.A.I.T.
2. To enrich women in their social life while at N.A.I.T.
3. To encourage a friendly relationship and successful communications among technologists.

ORGANIZATION:

The Society is comprised of four "houses," and each girl is placed in a house according to their last name. A house president administers each house and is responsible for that house to the Society Council. These four houses compete in social and athletice activities during the year.

ACCOMPLISHMENTS:

1. This year the main activities have centered around intra-mural sports. The girls participate actively in our program of basketball, volleyball, table tennis, badminton, archery, curling, and bowling.

2. Each house president was given a month in which to promote her house.

3. The Annual Toga Party is the climax to the year's operation. This one social function brings all the girls together for one get-together before the final exams.

The Aretean Society has done much to help the badly outnumbered girls on campus (about 10 fellows to every 1 girl). By providing a means of exercise, communication, and comradship among the girls at N.A.I.T., the Society looks forward to next year with eager anticipation.

THORNS AMONG ROSES

To create more fan support at W.I.C.C. athletic events the Challenge Cup was up for grabs at this basketball game. Pictured are Miss NAIT, Miss Eskimo, and "thorns" from Bus. Admin., Electronics, Club Culinaire, and Distributive.


Open
HOUSE
MARCH 17-18
NAIT

DENTAL LABRATORY TECHNOLOGY

The past quarter century has been an interesting one in the field of dentistry. New techniques have been developed and better materials used in laboratory procedures. These have contributed to an improved type of dental service.

Part of the dental renaissance has been due to a small group of dedicated men in practice who have felt that there were better, and more efficient ways of doing the everyday laboratory tasks. These men are the humble Dental Technicians.

Course of Study

The Northern Alberta Institute of Technology offers a two year course in dental laboratory technology. It is hoped that the skill and manual dexterity developed by the technician will be a contribution to society by helping to ease the problems in the dental profession.

Occupational Opportunities

Today there is an ever increasing demand for qualified Dental Technicians in various sectors of the community.

The N.A.I.T. Dental Laboratory Technology course consists of training in the fabrication and repair of full dentures, partial dentures, crowns and bridges, and orthodontic appliances. The greatest requirement for success in Dental Lab. Tech. is manual dexterity coupled with the acquisition of familiarity with materials and methods of construction. Patience, neatness, and an artistic sense are other personal qualities welcomed in a good technicial or mechanic, as his product must satisfy the patient in function and appearance. A majority of the dental students time is spent in the lab, as speed and accuracy are of vital importance. Academic prerequisites are a minimum of a high school diploma with credit in Science 20, or preferably Chem. 30.

Apart from laboratory procedures, there are lectures in Physics, Chemistry, Anatomy, English, Bacteriology, Mathematics, and Dental Materials. Films and visiting lecturers are other enjoyable methods of gaining knowledge of the Dental work. The students of Dental Lab. Tech. along with the Dental Assistants have formed a Dental Club in order to have representation and contact with the Students Council. The club is an educational and social club which competes with other technologies in intra-mural contests.

The two-year course is followed by a period of apprenticeship. When apprenticeship terminates the student is classified as a Dental Technician or a Dental Mechanic, having attained a mastery of dental restoration and is qualified to practice his craft.

Graduate wages of Dental Technology are not at the level desired, but with the increasing standard of work it is hoped this will soon change. The Dental Mechanics Association has been very helpful in the past with employment of students. With co-operation from dentists and the Dental Tech. Assoc. the technologists can hope for similar assistance. Employment may be gained in a wide variety of institutions ranging from a commercial lab to your own business.

TECHNICAL SKILLS ESSENTIAL IN RADIOLOGICAL TECHNOLOGY

The Medical Radiological Technician is a person who is trained in the use of X-ray and other ionizing radiations as applied to the diagnosis and treatment of injury and disease. The radiological technician must also be well trained in the art and science of caring for the sick. Patience, sympathy, tolerance and powers of observation must be linked with technical skill and accuracy.

The radiographic technician's working day can be very varied. Perhaps the procedure may be to take a simple radiograph of an arm or leg to detect a suspected fracture or dislocation: it may be to X-ray someone who has been injured in an accident: it may be taking films in the operating room during a surgical procedure to help guide the hand of the surgeon — speed and accuracy are mandatory here: it may be in assisting the radiologist in carrying out routine examinations to determine the cause of kidney or gall bladder trouble, or whether a stomach ulcer is the reason for the patient's pain and indigestion: it may be in performing the more specialized examinations where members of several hospital departments combine their skills to examine the spinal cord, brain, blood vessels or heart — here perfect teamwork and split second timing are vital.

Modern radiation therapy is carried out by means of X-ray, radioactive cobalt and caesium machines, radium and the radioactive isotopes of tantulum, gold, stronium, iodine and phosphorus. In addition to these sources or ionizing radiations many complex drugs and chemicals are being used with increasing frequency for some conditions.

The radiotherapeutic technician's responsibilities lie in the day to day application of the treatment prescribed by the radiotherapist, and in assisting in caring for the general health and welfare of the patient as well as the maintenance of accurate records of any treatment which has been given.

What Personal Qualities Does the Medical Radiological Technologist Require?

The technologist must have a strong sense of responsibility and a high degree of integrity, allied to the ability to work quickly and accurately. Because he is constantly working with the sick and disabled, this vocation calls for a pleasing personality along with the qualities of patience, sympathy, courtesy and thoughtfulness of others and their feelings. The future technician must be a person who is meticulous in work habits and conscientious about small details. Neatness of personal appearance is of highest importance, as is a willingness to abide by the accepted code of professional ethics. In addition, the technician should be of an inquiring mind and progressive in order to keep up to date with the details of the many and constant new developments in technique and equipment.

DENTAL ASSISTANTS

the dentist's Helping Hand

Who is the dentist's helping hand? Who makes his job easier and saves him time? The Dental Assistant that's who!

The modern dental assistant is a valuable member of the dental health team. She works along with the dentist performing tasks which will save him time and therefore, increase the number of patients he can handle in his office.

Many people think that the work of a dental assistant is very routine, but her work consists of manual skills, technical knowledge and clinical experience which make her indispensable to the dentist.

The dental assistant's duties vary more than any other personnel in the dentist's office, that is besides the dentist himself of course. Some of the duties she will be doing are:

1. Sterilization of instruments and materials.
2. General care of instruments and equipment.
3. Processing of x-rays.
4. Maintainance of patient records and office supplies.
5. Business correspondence and management of child and adult patients.

In addition to these duties she is expected to conduct herself, at all times, with a high degree of professional decorum fitting to her responsible position in the profession of dentistry.

There are many opportunities for graduate dental assistants. Dentistry is a profession which is continually growing in knowledge and the assistant can help the dentist incorporate new methods into his practice through patient education.

The dental assistant is the first person a patient sees when he comes into the office. Therefore, she must be poised and also present an atmosphere of efficiency. She should also be neat in her appearance and the office should appear well managed. Nothing makes people feel more relaxed than if they are greeted with a warm smile and by name.

Applicants must have a minimum of 67 high school credits including a "B" standing in any grade eleven Math, Science, or Biology 32 and English (or equivalent). Preference may be given to those who have a high school diploma or are eighteen years of age.

Applications should be made in February and should include the person's academic standing. The people who are being considered may have to come for an interview during the months of April and May. This interview is basically guidance. This is done so that when making the final decision the interest you have shown can be taken into consideration. The applicant is notified of her acceptance during the month of June.

Classes begin during the first week of September and the applicant is required to have a certificate of their medical health, current dental health and a record of innoculations to date. Forms for this purpose will be included with the letter of acceptance.

During the third quarter the students enter the practical training of the course. They begin their extern at the University Dental Clinic in March and remain there for the month. After this has been completed they go into private practice for six weeks in Edmonton or Calgary. Upon completion of this they return fo rgraduation.

During Open House the present dental assisting class will have displays set up, to show the public what is offered in the course. Some of the displays to be included are:

1. Mechanical and Manual Toothbrushes and the benefits of fluoride.
2. Display of practice in assisting and related duties.
3. Illustrations of oral anatomy and diseases of the mouth.
4. Nutrition in dentistry for children.
5. Receptionist in office management. The student will act as a guide and informist.
6. Material used in the dental office and laboratory. Uses will be demonstrated.

Any persons interested in the course or wanting to apply can arrange for an interview with one of the course instructors by contacting the receptionist available in the display room. Instructors, Mrs. Sitko and Mrs. Cunningham will be very pleased to answer any questions that you may have at that time.

MEDICAL LABORATORY

Delving back in time we find that medical technology is not such an old profession. It has only been since the advancement of medicine in this century that the medical technologist has come into existance. Originally the physician depended on his five senses to diagnose disease. But by the beginning of the 20th century, with the introduction of more precise methods and the increase of instruments used to diagnose disease, it became apparent that the physician alone could not cope with all the work. Consequently there arose a need for assistants. The medical technologist helps to provide this assistance. He or she, applies practical and scientific knowledge to the performance of laboratory tests designed to aid in diagnosing disease.

The work of the technologist is roughly divided into five phases:

1. Collection of specimens to be tested.
2. Preparation for test.
3. Learning to operate the various instruments used —at this stage you feel more like a mechanic than a lab-tech!
4. Studying methods and their principles.
5. Recording the results of the test.

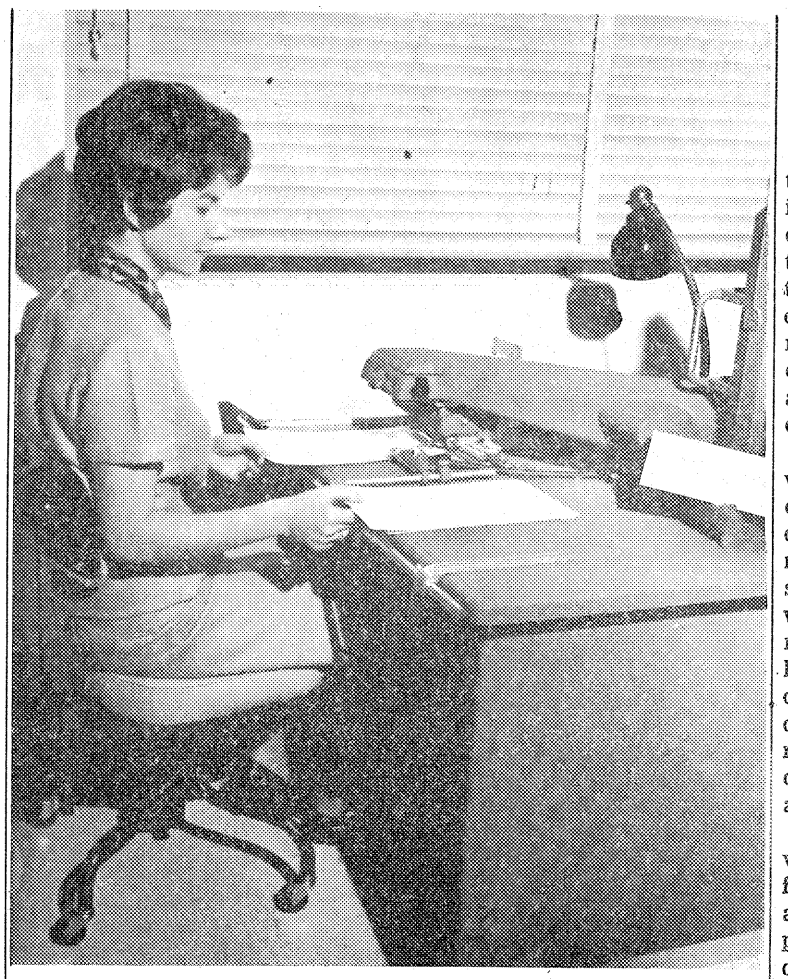
The major areas of learning are laboratory orientation, microbiology, serology, haemotology, immanohamotology, urinalysis, histology and clinical chemistry. Sound like Greek to you? I'll let you in on a little secret, but don't tell the instructors — it still is to me too!

During "Open House" displays will be set up in all these areas of learning in order that you may also get an understanding of what goes on in the classrooms for the first year of training.

The second year of training is spent in a sponsoring hospital where theoretical knowledge is put to practical use. This work will make up for the hours of classroom lectures though at times I'm sure you'll be wishing you were sitting down again. Seriously though the hospital training is truly enlightening and rewarding; not only from the satisfaction achieved by helping the patient but you also get paid by the hospital!

After certification you can specialize. Work is not restricted to hospitals either, you can also work in clinics, Public Health Labs, or in pharmaceutical, governmental or vet labs. Starting salaries are around $350 a month and there is an increasing demand for medical lab technologists.

Qualifications are Senior Matriculation with an overall average of 60% with a preference for Biology 30, although Physics or Biology 32 are also accepted. Throughout the course constant studying and reviewing are necessary but as they say, "In the end it's worth it." Anyone interested should apply to the hospital in which they wish to train as students as they aren't accepted by the Institute until they are accepted by a hospital.



BANKING

The World Wide Business

What does your banker do for you? To many people today, their banker is a friend. The modern banker shares the triumphs and tragedies of people in all walks of life. This certainly makes for an interesting and fulfilling career.

Banking is big business and world wide, and could be easily called the thermometer of the economic world. Because of the high degree of specialization in the Banking and Finance fields, trained people are needed who can step into any Bank, Treasury Branch, Corporation, Finance or Trust Company and fit easily into a clerk-typist, salesman, personnel, foreign exchange, teller or accounting position.

Banking Technology was set up to accommodate this need. This course enables its graduates to advance quickly in the specialized areas mentioned above. The program provides a basic business background for any financial career, although it is designed to familiarize the student with the bank and its operational routine. In order to achieve the above mentioned aims, Banking Technology is divided into two programs: Program A, of ten months duration, which enable the women to advance quickly into any responsible financial position and; Program B, of two years duration, which allows the men to advance steadily into an executive position.

The subjects taught in each program are designed especially for financial training. Such courses as Fundamentals of Business, Mathematics, present new and improved methods of preforming the four math operations and various methods of computing interest on installments, numerous types of loans, on notes and other monetary documents. Introduction to Business gives a good look into the methods used in organizing and managing business. This takes into consideration the forms of companies and current economic trends. Introduction to Banking, another interesting course, outlines the progress of the Canadian banking system since before Confederation, to the present day. The student is led through the conception and development of Canada's eight chartered banks according to the varying economic and banking trends.

A three-semester course in Accounting gives the student a basic knowledge in the fundamentals of business accounting and bookkeeping. Typewriting is another two-semester subject, giving complete instruction into the construction of business letters, memos, manuscripts and various other business documents. An interesting course in College English reviews the rudements of grammar, business letters, reports and essays.

A complete list of courses can be found in the N.A.I.T. calendar, each one interesting and informative. With a bit of diligence and study, two or even three years of bank training can be acquired in as little as ten months.

It is interesting to note the opportunities available to graduates of Banking and Finance. These people can fit easily into any financial department whether it be the accounting, loan, savings accounts, current accounts, credit and collections, foreign exchange or accounts receivable department, to name but a few. Because businessmen recognize our course, the graduate is assured of a higher wage, faster advancement and a rapid accumulation of business knowledge. If the desire to succeed is there, business is willing to open its doors for you.

What does Banking and Finance technology have to offer you? Among other things, it offers an interesting schedule of courses, a realistic Banking laboratory, and qualified instructors and teachers from various financial fields.

Do we interest you? Come and see us during Open House. We are on the fourth door of the Tower Building.

COMPUTER TECH.

In today's world of machines, the giant oceanliner, the rockets in space, the monster-sized machines of the construction industry, all bear scant resemblance to the lowly wheel. Even so, today's digital computer with its complex maze of wires and lights and equipment looks scarcely like the ancient abacus with its strings of beads.

Yet, the analogy is apt. For the wheel is a device, invented by early man, to enable him to move objects that he previously could not. Thus it was an invention designed to increase his ability to do work. From this small beginning man has progressed, has increased his power so that machines of today are literally changing the face of the earth, cutting through mountains, diverting rivers, conquering the land, the sea, and the air above.

Similarly the abacus was a device to help man think, to perform calculations faster and more accurately. Yet, today's computer performs calculations at the speed of light, can store thousands, even millions, of characters, and most important can be instructed to do a series of operations without intervention by man.

The electronic digital computer is a device for storing, comparing, processing or usefully modifying knowledge. And with its capabilities it enlarges human brainpower just as other machines enlarge man's muscle power.

Computer Technology at N.A.I.T.

Computer Technology is an interesting and challenging course. Its objective is to turn our competent computer programmers, that is, trained personnel able to instruct any computer to perform usefully. A programmer must present to the computer a set of minutely detailed instructions to perform each step in the solution of a problem and any alternative steps needed when restrictions to the problem are broken. This means he must discipline his thinking so that he functions with clarity and precision. He must be able to define the problem. He must reach an accurate solution that is both practical and flexible. And, he must be able to put his solution to use so his knowledge and work becomes productive.

The course takes two years to complete and may be divided into three rough divisions. These are courses related to computers, to mathematics, and to business.

The computer courses are designed to give the student not only a familiarity with programming but the basic foundation behind computer logic and concepts. And so the gauntlet is run: an introduction and history of computers; machine and assembler programming languages; compiler languages, FORTRAN, COBOL, PLI; techniques of tape units and random access devices; systems study and design; compilers; translators; monitors and many more.

In conjunction with computer lectures there is a lab averaging at least an hour a day. It is primarily for program writing and testing.

There are five quarters of mathematics. Two are devoted to computer math, one to business math, and two to the study of statistics.

The business courses cover a broad range of studies. Accounting is taken for six quarters. The first year consists of general accounting and the second emphasizes cost accounting. Graduate students interested in an accounting degree may write the Certified General Accountant's first year examinations. If successful they will enter the second year of a five year course which is studied by correspondence from the University of British Columbia. Further course exemptions are pending. English courses are taken for three quarters. The remaining are one quarter courses such as Business Procedures, Oral Communications, and Introduction to Business.

Prerequisites include Math 30, English 30, and passing a series of aptitude tests. Also the computing staff highly recommends that undergraduates obtain employment in a related area of data processing. The added experience gives students a stronger background and better insight to the concepts studied in the second year.

All interested persons, and especially prospective students (or employers), are invited to see the displays shown in the Data Centre, Room T 312 in the Tower Building. Students will be on hand to answer any questions about the equipment on display or about their course of studies.

SECRETARIAL TECHNOLOGY

Secretarial Technology, offers a challenging future for prospective students who desire a career as executive secretaries or administrative assistants.

The purpose of this program is to develop a high level of technical skills, to acquire a sound general knowledge of business, and to cultivate good human relations.

In business there is an ever-increasing demand for men and women well versed not only in the theoretical but also in the practical aspects of their field. The student receives the benefit of this knowledge and experience while studying under a highly progressive system and working with an extensive array of modern equipment.

To produce well-rounded, flexible students capable of entering a position with a negligible adjustment period, a board of advisors from business together with experienced instructors have selected an extremely comprehensive timetable.

The First Year

As the background of most students in business education subjects ranges from zero to [illegible] years, special adjustments have been implemented. In typing, the student will have the opportunity to operate both manual and electric typewriters; in shorthand, an impressive shorthand lab is available for speed building.

Secretarial procedures utilize the pupil's skills through realistic office situations; business English ensures correct grammatical transcription and composition.

Through an introduction to business course, the secretary becomes familiar with general business practices. The foundation of most firms is its economic operations and the workings of credit, which the student has an opportunity to learn through Accounting and Credit and Collections.

Not only should a secretary be adept at her skills and knowledgeable in her profession, but she should also cultivate a charming appearance. Realizing each girl possesses innate characteristics for good grooming and proper etiquette, our program provides a 50-hour personal improvement course. During these classes, lectures in proper application of make-up, hair care, wardrobe planning — to name a few — are covered by a professional model.

Why A Second Year?

The first year builds a solid framework from which the second-year student may continue to more advanced and specialized training.

Application of typing is now emphasized through project work and specialized instruction — as in medical and legal typing. As the theory in shorthand has now been covered, the shorthand writers may turn their attention to the building of speed toward a desired goal of 140 w.a.m.

The majority of legal transactions which flow through an office are concerned with private law. The business law course encompasses the major areas which affect a business enterprise. This includes the law of the contract and of real property which are discussed at some length.

Responsibility of the individual is an objective of this program. Office management and personal principles and policies prepares a potential executive secretary or administrative assistant for a managerial or supervisory role. Not only will the secretary be responsible for personnel and organization of the office, but she will quite likely have to operate common business machines such as the dictaphone, executive typewriter, and duplicating equipment.

In today's technological society, the volume of data to be processed in a business has increased to the extent that it is no longer feasible to process data entirely manually. The most common method is through the use of business machines such as the various adding machines and calculators, which the student will operate. A fascinating course, Introduction to Data Processing, acquaints the secretary with the basic concepts of the punched-card and electronic equipment. A Unit-Record Lab is used to demonstrate various punched-card equipment.

Also, to succeed in competitive business, knowledge of the interrelated factors affecting an enterprise is vital. Economic geography and sociology attempt to fulfill this need.

Self-expression is a requisite in any profession and in oral communications the student learns exactly this. The art of preparing a speech and delivering one correctly is invaluable training for a secretary who will be in constant contact with the public.

To obtain maximum performance and satisfaction in an office, an understanding of the motivation and behavior of the individual is essential. Through an interesting course in psychology, the student gains an insight into human relationships. This, in turn, enables a senior secretary to deal more effectively with those she is associated with or is responsible for.

Extra Activities

School spirit among the students is high. Last year SECRETARIAL won the Challenge Cup from another technology by staging a Penny Drive.

For two consecutive years, students from this technology have won the title of Miss NAIT.

And The Future?

Upon successful completion of this difficult but extremely extensive and high-calibre program, the graduate will receive an Applied Arts Diploma. A starting salary of $300 a month would not be unreasonable.

Opportunities in this field are excellent as there is a shortage of well-trained secretaries. Employment is not necessarily limited to this continent. Two present graduates are contemplating a teaching position in Africa with CUSO (Canadian Universities Students Overseas) while another hopes to obtain a working visa in Britain.

The program of the Secretarial Technology and the facilities at NAIT offer the potential executive secretary or administrative assistant the fulfillment of her ambitions.

WHY DISTRIBUTIVE TECH.

Why? Because taking Distributive Technology is like getting in on the fifth floor, not the ground floor of the business world. With Distributive you ride the elevator to the top, not climb the stairs. Yes, the course offers a good background for the young man or woman with aspirations of reaching a top executive level.

Distributive offers a thorough knowledge of what is involved in business. A varied program to train those who will be in the process of distributing goods from manufacturers to consumers.

Distributive Technology was first offered in 1964. Now, under the guidance of Mr. Baird the course runs smoothly from the teaching of subjects to the participation in social functions.

One of the better known clubs in the school, Distributive participates in school activities as well as planning many of their own. The club is run by an elected executive consisting of:

President — Lorne Holladay
Vice-Pres. — Jim Stangier
Secretary — Linda Schultz
Social Convenor — Don Walker
Treasurer — Per Jorgensen
Press Agent — Ken Tomlin

Queen Week, Open House, and sport activities are a few of the functions enthusiastically joined in by the club.

In addition to the main core you receive courses applicable to the option you choose. If Advertising is chosen you take Advertising courses as well as creative labs. In Salesmanship you learn of the various facets of sales in the specialized course. In Merchandising courses in retail management are taken as well as retailing labs.

Also in the second year practical on-the-job training is required in Salesmanship and Merchandising. While in Advertising the time is spent on Labs. This time spent on jobs gives the students a more realistic view of the positions they will secure after graduation. The Advertising lab time is spent designing advertisements as well as receiving instruction on Photography, Art and Public Relations which give the student a varied knowledge of the advertising field.

With the thorough training received in Distributive Technology jobs are never scarce for the graduates of the course. The courses and the on-the-job training gives our graduates a more mature approach to their future positions. Distributive Technology, a course to prepare young men and women to join the vast complexity of the business world!

Even though Distributive is one of the more enjoyable courses socially there is a lot of work involved in receiving the essential training for the future. In the two-year training you receive a basic knowledge of the various fields of distribution.

In the second year, students may choose the option of their choice to specializez in. A choice of Advertising, Professional Salesmanship, or Merchandising Administration. In Salesmanship a pattern is offered to improve skills and techniques so the student can apply the knowledge to any sales position in business. In Merchandising they are taught the principles and practices of retailing from a theoretical and practical approach. And in Advertising the students are given a knowledge of all that is involved in this fascinating field.

"CHECK AND DOUBLE CHECK"

BUSINESS ADMINISTRATION

The Northern Alberta Institute of Technology offers a unique Business Administration course. The Business Administration Division avoids the womb-like atmosphere found in many business schools by presenting a realistic, practical business course. The atmosphere of the market place, rather than that of the "Ivory tower", predominates. There is a high-in-the-clouds, forward-looking thought in the course content, but it is tempered by a businesslike, profit conscious approach.

The Northern Alberta Institute of Technology offers many of the advantages of a small university. Classes are relatively small and the instructors are often able to provide individual assistance. The student is recognized as a student and not merely as another number.

Prospective students should be aware that although full matriculation is not required for entrance, those with a matriculation pattern background are more likely to be successful than those with a general or business diploma.

A student with a solid base in mathematics, English composition, the Social Sciences, and a diversified outside reading background, will likely find his business studies both rewarding and self-satisfying. The younger applicants are required to meet rigid entrance standards. Some of these entrance requirements may be waived for an older, more mature person with a proven business background.

After a common first year, a student specializes in his second year in one of the following majors in which emphasis is placed on Accounting, Statistics, Data Processing and Administration Courses:

Accounting

For the students who wish to specialize in accounting, the majority of graduates will find employment in cost control, controller, and general accounting positions. A student can also branch out in other areas such as sales and administration. Opportunities for the graduate are excellent and the demand for graduates exceeds the available supply.

A graduate who possesses the secondary school academic requirements may at the discretion of the Society of Registered Industrial Accountants be allowed to write the second year exams. (The Certified General Accountants will allow a graduate who possesses matriculation to write the second year exams.)

Persons in doubt about their academic qualifications should check with the accounting department at N.A.I.T. or the accounting associations.

Business Management

This option is designed for the person who does not wish to become a specialist. The manager in today's business community should not be a specialized person, but rather someone who is able to deal with all aspects of business. An ability, whether developed or natural, to make decisions, to think, to motivate people to work together to a predetermined end, will be the factors that "make or break" a student in this option.

After a period of orientation with a company, graduates may expect to work in a supervisory position. It should be stressed that the graduate should be prepared to work in all the phases of business, such as marketing, finance, production, etc., before he can hope to achieve an administrative position. This option is also recommended for anyone wishing to start his own business venture.

Credit Administration

This is the first institution in Canada at this level of education to offer specialized training in credit administration. This option is designed to give an overall view of credit and how it relates to other aspects of business. Students will take specialized courses in the various types of credit.

A unique feature of this option is the requirement that the student take on-the-job training in a credit department of an Edmonton firm. Graduates will work in Industrial or Consumer credit, in the areas of credit granting, credit reporting, and in collection procedures.

Office Administration

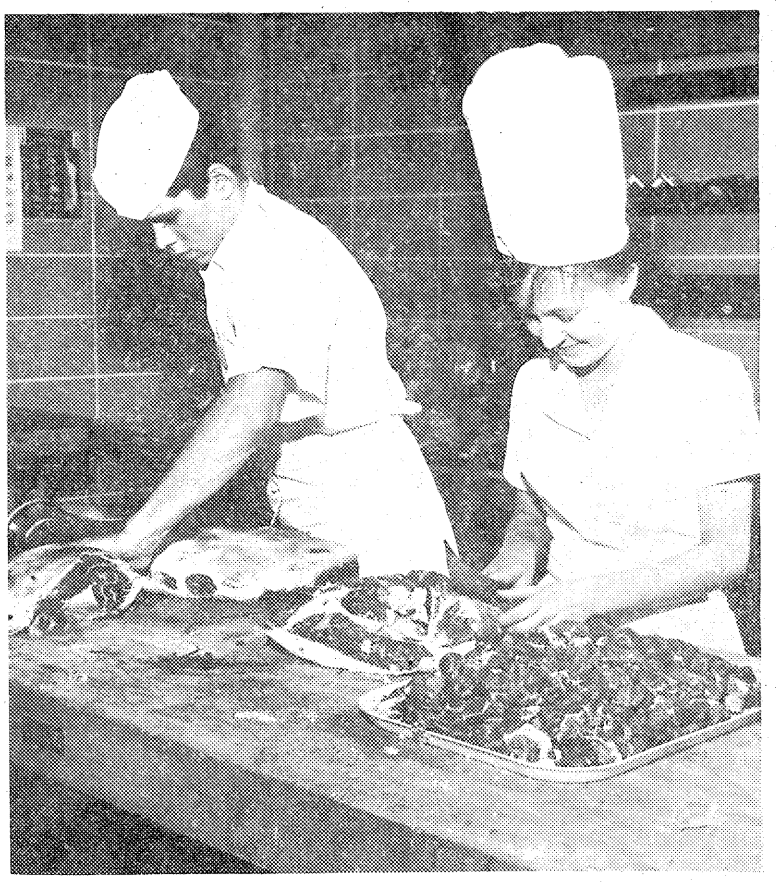
Office Administration has a two-fold purpose. Firstly, it is designed purposely broad in nature for students who want to arrange a program in office organization, supervision of office functions, office problems, office management, method analyst, system assistants, etc. The student develops skills in areas related to electronic data processing as well.

Secondly, a successful graduate of the Office Administration option may be permitted, at the discretion of the Department Head, to enroll in the second year of Computing Technology. Upon successful completion of his third year will also receive an applied arts diploma in Computing Technology.

The instructors in the Business Administration department are well qualified. The combination of experience and education have made the instructors in Business Administration excellent guides for the student, so that he may receive the most out of the two or three year programs.

In many respects, Business Administration may be the most difficult course at N.A.I.T. The student has to develop personalitywise, which may be the hardest, while at the same time he has to absorb a vast amount of essential business knowledge. The "flash-in-the-pan" type will not be successful here. The person who has a combination of ability, drive, set objectives, and endurance will receive the most benefit from the course.

Business Administration has a unique theme for their 1967 Open House weekend display. It is entitled "Salute to the Transportation Industry". The display will be arranged in Room T 305 of the Tower Building. Everyone is cordially invited to visit the display.



FOOD SERVICES
COMMERCIAL COOKING

The Food Service Department at the Northern Alberta Institute of Technology has a dual function.

First the Food Service Department trains young men and women for the expanding field of Food Servicing. Secondly, the Food Service Department provides catering as a professional service to the Institute as a whole. To effectively train students and at the same time provide suitable service to the Institute, a number of courses have been developed.

They are:

Commercial Cooking

This is a two-year course. The objectives of this course are to develop the students appreciation and understanding of sound food preparation methods. This entails a knowledge of the physical facilities within a food preparation areas as well as various methods of cooking and serving foods.

The course is designed to fill the growing need for trained personnel in this vital industry. Students are taught large quantity food production, meat cutting, pastry and dessert baking, salad making, soup and vegetable cookery and the service of food. Mastery of the practical skills is achieved by realistic and practical work in the kitchen while the comprehension and technical information is taught in the classroom.

While the first year of the course acquaints the student with the basics of Commercial Cooking, the second year broadens and deepens the knowledge and skills of the first year. Emphasis is placed on the culinary arts. Advanced cooking, ice carving, fat sculpturing, pulled sugar work, chocolate work and marzipan, are some of the areas covered in the second year. Professional responsibilities are also emphasized in the second year. The student is encouraged to assess himself as a professional food worker. He is trained to realize that good work habits and standards of cleanliness have an important bearing on the quality of the food worker.

Since catering is a service to people, the prospective student should have certain personality traits. He should be even tempered and have a sunny disposition. He must be able to work under pressure, communicate effectively, and bear in mind that food catering means evening and weekend work.

Employment Opportunities

Jobs are many and varied: restaurants, hotel dining rooms, department stores, coffee shops, clubs, hospitals, institutions, mining and logging camps, and catering firms are all looking for people trained in quantity cooking.

Starting salaries vary depending on experience, personality, willingness to cook, amount of training and other factors.

The tuition fee is $69 per year and supplies and books are estimated to cost $150 for both years.

FOOD SERVICES
COMMERCIAL BAKING

A very important part of the Food Service department is the Bakery section. It is in this area that training is given in all aspects of Baking. Before going any further it might be well to examine this word "Baking" and find out just what it includes. As used by a baker it covers the making of all types of bread — white, whole wheat, rye, fruit breads as well as buns, rolls, and Danish pastries in fact everything which uses yeast to leaven it. Besides this the baker makes cakes in every variety, pies and their fillings, pastries and cookies of all kinds, makes the fillings and icings to go in and on them and applies the decoration.

In addition to these direct skills there are included related subjects, quality control, stock control, costings, selling and display and business management.

Open House

But why not come and see for yourself! For Open House days the Bakery — situated just to the North of the main cafeteria down the stairs — has a big display of mouth watering goods showing part of the wide range of items that the modern baker can produce.

In the main bakery the students will be in action showing how they go about their work and what is entailed in their training.

Two main training programmes are offered in this section.

1. A two-year program in
Commercial Baking

The prime objective of this course is to graduate qualified and competent bakers having a sound background of practical, theoretical, and experimental baking with related mathematics and business knowledge enabling them to be employed in positions of responsibility in the industry.

Some of the subjects covered are:
- Practical Bread, Cake, Pastry & Cookie Making
- Baking Theory & Practice
- Sanitation
- Bakery Science
- Trade Calculations
- Business Organization
- Merchandising

Full information about the course can be obtained from the Bakery Section or from the Registrar.

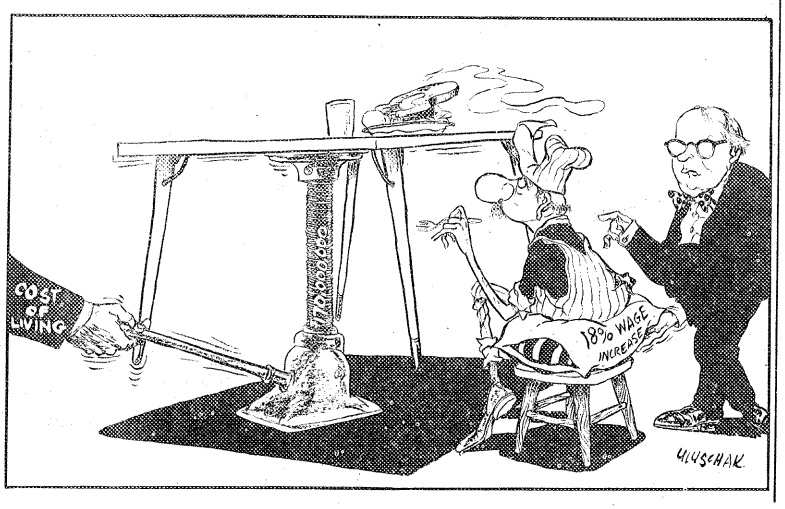
2. The second program is the Apprentice Baker training scheme offered in conjunction with the Provincial Department of Labour.

Here the student obtains a position with a baker o fhis choice and becomes registered as an apprentice. Training is done while on the job (and while earning!) in this practical situation. Each year of the 3 years this training takes, the student attends an 8-week course in the Bakery section obtaining theory and related knowledge necessary to reinforce his practical work.

Further information about this method of entry to the trade can be obtained from the local Apprenticeship Board office or from the Bakery here.

Besides these two major programs there are a number of short courses in various bakery subjects offered in the evenings. This provides an opportunity for Bakery workers to increase or renew their knowledge, enabling them to keep up with recent developments.

Facilities for these programs are provided in the 4500 sq. ft. this section occupies. Consisting of two large bakeries and laboratory classroom it is fitted with the latest of bakery equipment and machines.



WAITER WAITRESS TRAINING AT N.A.I.T.

In most eating establishments the responsibility for pleasant dining finally comes to rest on the WAITER or WAITRESS. They are the ones who can really make a guest feel welcome — wanted. Their personality and attitude will either bring the customer for another meal or send him away for good.

Food Sales and Service training is available on a 10-week training basis. The prerequisites for young men and women wanting to become Waiters or Waitresses are: age 17, and a good command of the English language. It is also essential that the student have a pleasant personality, ability to get along well with others and a sincere desire to please.

Employment is available in cities, in towns, at summer resorts, at winter resorts and wherever fine eating places are found.

The specific objectives of the Food Sales course are:

1. To teach the accepted procedure in serving food.
2. To teach the correct way of setting a table.
3. To teach the different types of service.
4. To develop correct relations between the Waiter or Waitress and guest he or she serves.
5. To acquaint the student with the different foods and dishes found on the menu.

A student puts into practice what she has learned in the classroom.

Food For Thought . . . DIETARY SERVICE

What is a Dietary Technician? She is a person trained to assist registered Dietitians and also assume a major portion of the responsibilities in a small institution that does not have the services of a Dietitian.

To receive her diploma the Dietary student must successfully complete a two-year course of studies. The course starts in September with classes until May. Beginning in May the student gains practical experience for eight to ten months by training in the Dietary Department of a hospital or restaurant that is affiliated with the Northern Alberta Institute of Technology. Then at the end of this training the student returns to NAIT for ten weeks of classroom instruction.

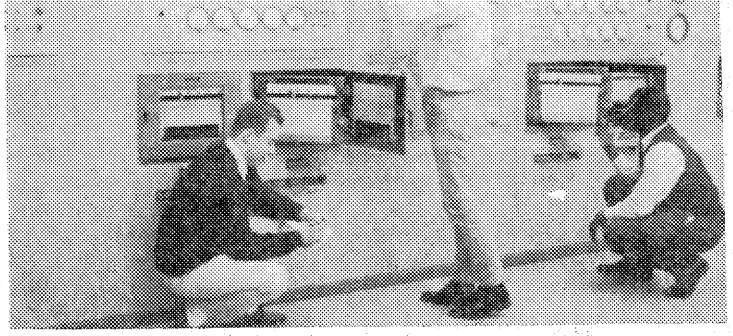
Approximately twelve hundred hours are spent in lectures and laboratory sessions. Subjects taken the first year include nutrition, foods, commercial food preparation, personnel management, institutional management, business math and English, typing and sanitation, health and first aid. In the second year, there is further instruction in many of the above subjects as well as Dietary office procedures and food purchasing.

The fees for the course are fifty-four dollars plus the registration fee of five dollars. This does not include the price of textbooks. However these textbooks will serve as excellent reference material after the student has graduated and is out working.

All students registered in Dietary Service Technology are required to wear white uniforms, white shoes and white stockings. Upon graduating the Dietary Technician wears a standard white uniform with gold trim, a cap with gold trim and her graduate pin.

Opportunities for jobs are very widespread, covering hospitals, nursing homes, restaurants, cafeterias and residence dining halls.

If you are the kind of person who has a keen interest in people, enjoys the challenge of difficult tasks and would like a very interesting vocation, then you belong with the active energetic group of Dietary Technicians.



AIR CONDITIONING AND REFRIGERATION

The air conditioning and refrigeration industry, like many others, is undergoing a transition with regard to the utilization of technically trained personnel. It is estimated that for every professional engineer engaged in research and design in the industry, there is a need for five to ten sales engineers, application engineers, operating engineers, and air conditioning and refrigeration technicians to plan and design, sell, install and operate air conditioning and refrigeration systems.

Helping to educate these personnel is the role being played by the Air Conditioning and Refrigeration Division of the Northern Alberta Institute of Technology, one of the few technical institutes in Canada offering a comprehensive course in air conditioning and refrigeration.

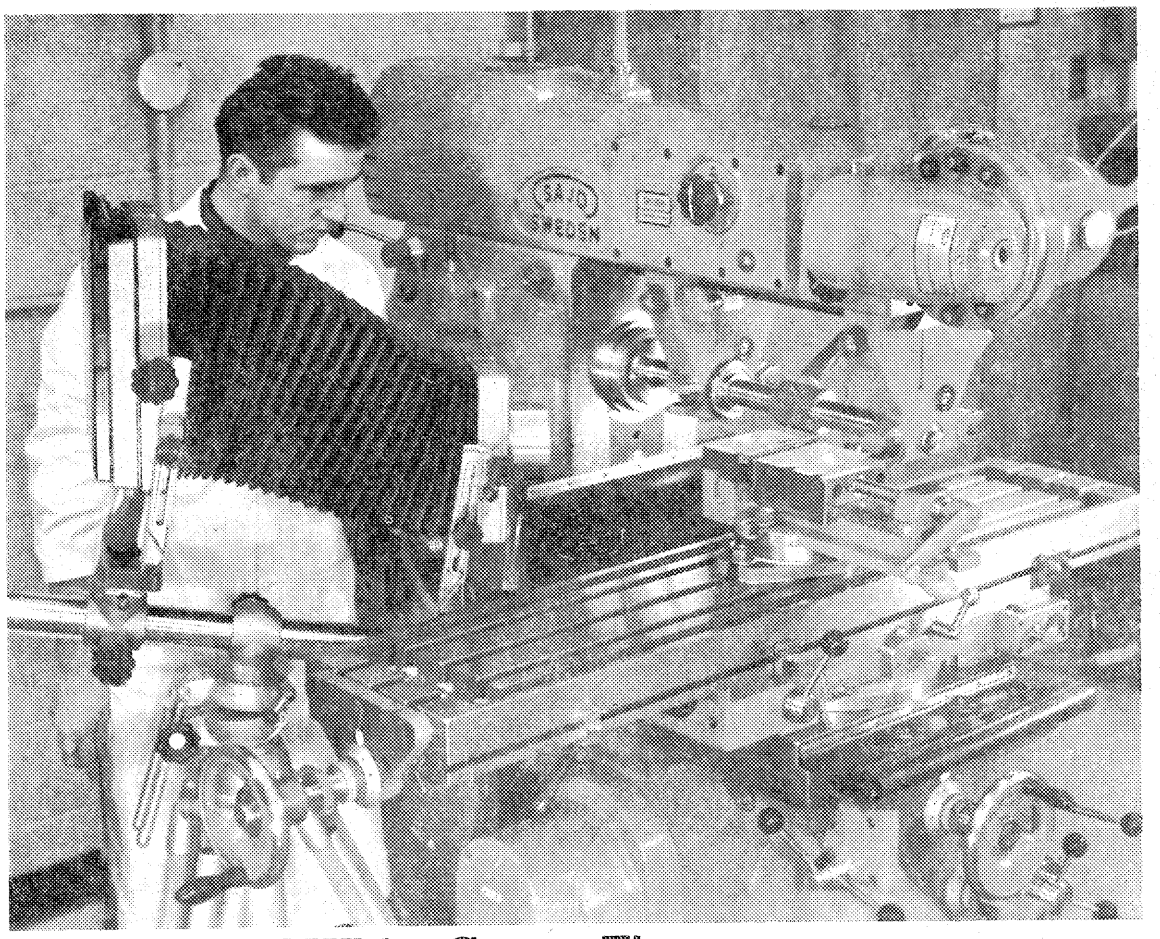
Looking at the course from the academic aspect, the student receives instructions on subjects such as English, Physics, Mathematics and Industrial Relations which are co-related with the main course. There are also supplementary courses in welding, sheet metal work, and machine shop practice relating to air conditioning and refrigeration.

Teaching is not confined to the classroom, the student spends much of his time in the laboratory where he gains practical experience. These labs are fully equipped with the most up-to-date apparatus and equipment. There is a large training unit for air-conditioning practice. This unit is controlled by one of the most modern controls systems, which is arranged so that the problems of a practical nature common to the field could be set for the student to solve. There are also other facilities used for teaching refrigeration heating and air conditioning and modern equipment is continually being added in order to keep abreast with the latest developments in the field.

Two-Year Course

During the first year of the course, emphasis is made on mechanical refrigeration theory and practice. This includes installation and reservicing of typical refrigeration equipment, as used in commercial and industrial instalations. During the second year the student concentrates on heating and air conditioning system design and installation, and the interpretation of engineers and architects plans and specifications.

Study tours of large industries in and around Edmonton are included in the curriculum in order to familiarize the student with the industry with which he would be associated after graduation. Experienced engineers in this and other related fields are frequently invited to give talks to the students, so that on completion of his course the student will have a good idea of what to look forward to in this highly diversified field.



Black and White Comes First . . . . . Colour Comes Later

PHOTOGRAPHIC TECHNOLOGY

Photography, as never before, has a responsibility to the people and economy of Canada. Once a medium of pleasure and beauty, photography has refined and broadened itself where now, those adequately trained in photography can help to contribute important information towards the production of saleable and competitive goods.

The Northern Alberta Institute of Technology is meeting this challenge by offering to those with the entrance requirements, a thorough and complete course in Photographic Technology.

This is a course designed to equip a person to accept a photographic problem with clarity and understanding, whether it be in the darkroom or behind the camera: Emphasis is put on "doing", so that each stage of theory is accompanied by practical laboratory instruction and assignments.

The first years of the two year program puts the course weight on all phases of black and white photography. Densitometry and other density controls are stressed along with general working procedures. Quality control systems are introduced to ensure the student learns maximum efficiency, cleanliness, and consistency in the darkroom. The course includes print and negative retouching as well as the techniques of presentation.

Color processing and printing are incorporated in the second year studies, with the techniques of control and production clearly indicated in each by theoretical and practical instruction. Advanced black and white photography, both portrait and commercial, is continued with further instruction in laboratory and on location. Basic Motion Picture procedures are also given, including editing and sound recording.

Employment is available in the darkroom of studios, large firms and industrial plants. Medicine and Police are using photography more and more, while there are good opportunities in the Audio Visual field and the various retailing and wholesale outlets. It should be realized that the greatest area of initial employment is in darkroom technician work, but the opportunity to advance to the camera will be greater for those receiving training in such. Like any competitive position, the potentials are limited only by the photographer's ability, experience and training.

The Northern Alberta Institute of Technology has provided studio and laboratory space to ensure the student the best opportunity for practical and theoretical instruction possible. Every piece of equipment is new and up to date, yet functional and of the type found in the working photographer's studio, darkrooms and laboratories.

THOUGHT COLOUR LATELY?

Seen anything colourless lately? It's not likely. Unless you are completely colour-blind or live in a perpetual darkness you can't help but see colour. You take it for granted, though, just as you rarely stop to think about your heartbeat.

Have you taken any colour photographs lately? Chances are you have. You've seen a lovely mountain scene, taken out your camera, pushed the button, and sent the film away. Then you forgot about it until it was returned. The results were quickly glanced at, then either flashed on a screen, or stored in a box, envelope, or albumn; available for a qick, reminiscing look years from then. Unless you're deeply interested in photography, or are taking a course in photography, you rarely wonder how it is possible to capture nature's colours onto a piece of film. You took the results for granted.

We second-year photographic tech. students at N.A.I.T. can't take the results for granted. We learn why colour photography is a reality. We learn how colour films are constructed, and why they are so made. We use a variety of materials, and learn why they differ. We are taught why there is an Ektachrome, an Ektacolor, an Ektaprint, a Type 6740 Anscochrome, an Internegative, a Type 'S' and Type 'L'; and so the list stretches. We realize what a colour is, and why we see pink instead of red, green instead of blue. We learn why an orange may look like a lemon in a photograph, and how to make an orange look like an orange. In short, we learn how to control one of our "Modern Miracles".

But knowledge in itself isn't too useful. So when we are finished here at N.A.I.T. we can go to work in a variety of ways. It may be in one of Canada's growing number of colour finishing labs, or in a studio taking colour photographs, free-lancing to fill our magazines with colour, or in our own business. But the end result is the same. We will be the intermediaries, we will provide the link between that lovely scene you saw on your vacation, and the times in your living room when you can again see the same splendour, IN FULL COLOUR.

OPEN HOUSE

The Open House display of the Photographic Department has been designed to provide our open house guests with a first hand view of our section. We have displayed in our studios examples of our photographic work and a small sampling of our working equipment. The prints and transparancies on display have been planned, photographed, processed and finished by the first and second year students. We hope you will enjoy your tour through our labs, and our photographic display.

FORESTRY TECHNOLOGY

The purpose of the Forest Technology course is to train men in the vital role of managing our forests and other renewable resources. The course is spread over two years, the first of which is spent at N.A.I.T. and the second at the Forest Technology School in Hinton.

In the first year the emphasis is on theory with about a 60:40 lecture to lab ratio. Some of the satellite courses covered in the first year are: Effective Communications, Math, Business Administration, and Construction Theory. Zoology, Wood Technology, Botany, Soils, Weather, and Dendrology are taught in the first year with practical application being emphasized in the second year.

The major second year project is a comprehensive management plan on an assigned block of forest. Students must prepare maps, and compile growth figures on that plot by doing his own field work using the knowledge he has gained from his lectures. Second year courses have a lecture to lab ratio of 40:60.

Between the first and second years the student is unable to get away from his courses as he must prepare both a comprehensive insect collection and plant collection. These must be turned in at the beginning of the second year together with a report on the student's summer work in one of the many branches of Forestry.

Open House '67

Forestry's open house display looks like the best yet. The students are working hard to depict every forestry subject covered in the first year course. Meteorology will be represented by a model lookout tower, a fire finder, and a model of the weather station that is found at all lookouts. Botany will be represented by a plant collection, models of different parts of the plant, and the operation of growth chambers will be shown and explained. There will be displays of Forest Products and Wood Defects representing Wood Technology. Zoology will be represented by a comprehensive collection of over 800 insects of Alberta's forests. The soils display will be of interest to everyone, as there will be a continuous series of soils tests performed by students while, also on display, will be a large rock and gem collection. The whole aspect of forestry will be represented by displays of fire fighting equipment, mensuration instruments, and a model saw mill. During the day various films will be shown to the public on different aspects of forestry which should be of interest to everyone. And, of course, Bertie will be on hand to greet the public and welcome everyone to the Forestry paradise.

Bloody Mary Trophy

Were you all wondering who won the Bloody Mary Trophy? Well, Forestry won it hands down with 95% of the class donating. The other 5% were not allowed to give as 100% of the class showed up inside the door. This would not have been possible (if it had been) on a volunteer basis as we had to drag certain students out of bed and the library so that they too could become a member of the Drip club.

Muk-Luk

Forestry, with the generous support of Sign Writing, were able to represent N.A.I.T. well in the Muk-Luk parade of 1967. The float on which Bertie was the star (and our Queen was the beauty), won second in the non-commercial class. Our deepest appreciation must go to the instructors who contributed a great deal of their own time to supervise and advise on the construction of the float. The 8-foot high crest, made for and used on the float, has been donated to N.A.I.T.S.A. for their own use.

APPRENTICESHIP DIVISION

What is apprenticeship? Apprenticeship is an earning while learning arrangement. It is a training-on-the-job and a trade school training program. An apprentice is employed by a firm engaged in one of the 28 trade areas now designated in the Province of Alberta.

A contract is drawn up by the Provincial Government- Appren ticeship Board between the employee and his employer. The length of apprenticeship is usually three or four years, with a part of each year spent taking formal training at a trade school. The length of training per year is usually six to eight weeks, but may be as little as four or as long as twelve. While at school, the apprentice is treated as a regular student, with the normal responsibilities and privileges of the school.

The contents of the course will have been prepared by the Apprenticeship Board, with the assistance of an advisory committee for that particular trade and a close liaison with the school.

There is a minimum education requirement. For many of the trades it is Grade X, with emphasis on mathematics, science and English. Other trades may have a Grade IX minimum requirement. Many employers do not accept this minimum as a trade minimum; they may require a young fellow to have Grade XI and, sometimes, Grade XII. We can, therefore, expect to have some pretty high quality apprentices in some of the trades.

The economy of Canada and Alberta is expanding, and the apprenticeship attendance during 1966 in Alberta increased 27% over 1965. In certain areas extra classes have had to be scheduled even above the projected increase for 1967. Many programs start the first of September and carry on to the end of June. The largest registration in a single day at N.A.I.T. was January 3, 1967 when almost seven hundred apprentices were enrolled.

There are many opportunities available to young men who would choose to become skilled craftsmen by joining the field of work under a contract arrangement which provides for formal schooling, that will enable them to become recognized as well trained.

In the construction trades we have the carpenter, the bricklayer, and the plasterer, the painter and the decorator, the tile setter and the lather. In the trades closely associated with the construction industry, we have the piping trades, the plumber, steamfitter, gasfitter. We have the sheet metal mechanics, the iron worker, the roofer, the glassworker, and the welder.

We have three electrical trades — the construction electrical, involved in wiring and electrical services in buildings; the power electrical — associated with the distribution of electricity; and the communications electrical, working with telephones and related equipment. We also have the radio technicians, involved in the repair of radio and television equipment.

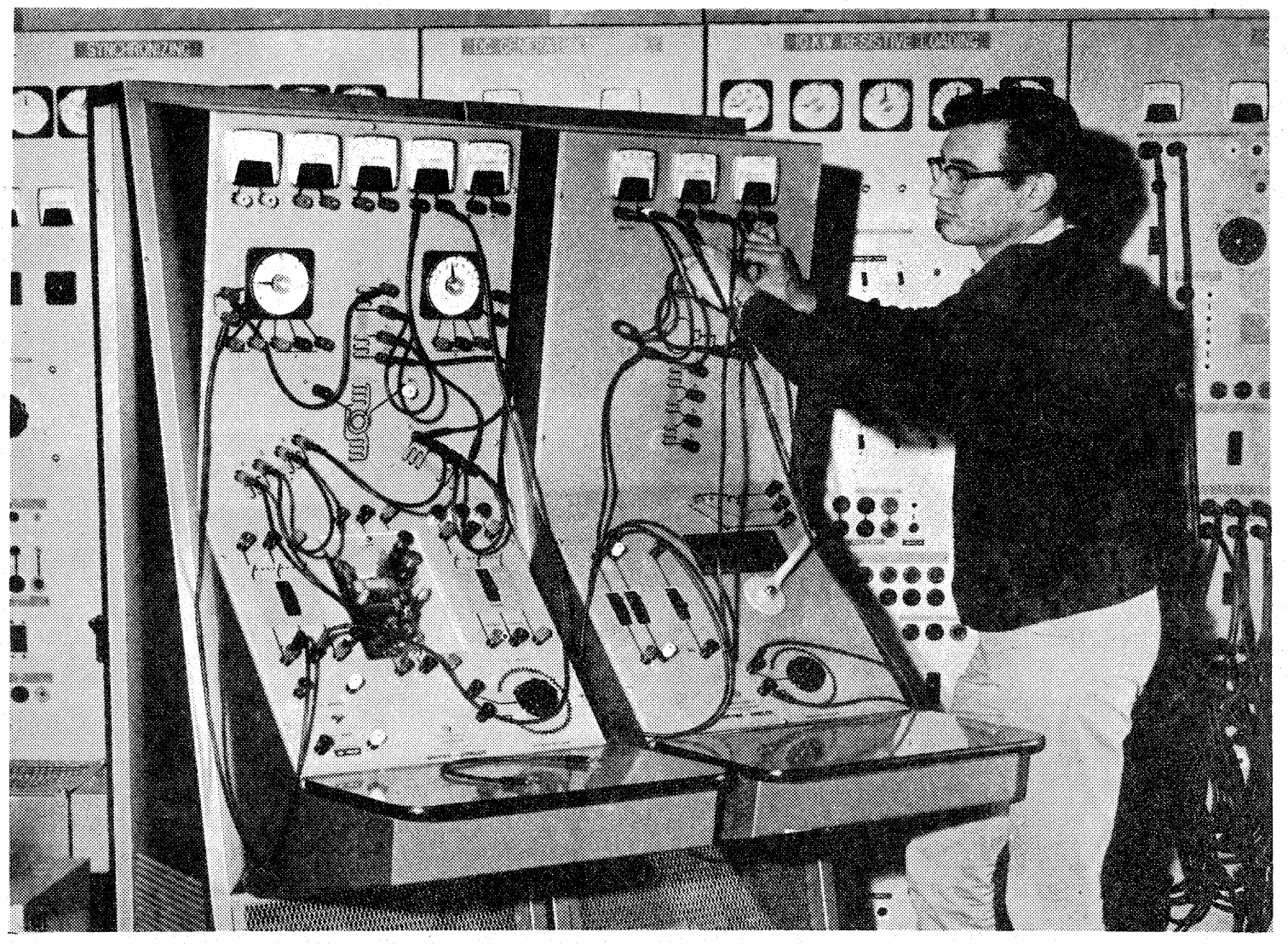
In the automotives and diesel area we have the motor mechanics, heavy duty mechanics, auto body mechanics and the partsman. We have the refrigeration mechanics and the appliance serviceman, who is involved in the repair and servicing of household appliances. We also have the machinist and the millwright.

In the food preparation areas, we have the cook and the baker.

The technologies that have close contact with apprenticeship in the same area are in a very fortunate position. High calibre instructors are found at N.A.I.T. This means that they normally have a very good academic background. Since the instructors in the technology program are involved in, or influenced by, the apprenticeship program, the result is a very well balanced technology. It is recognized that the technologist is between the tradesman and the engineer (or professional of the field); if he is to fulfill his purpose he must not migrate too far either toward one end of the scale or the other. The influence of the tradesman or apprentice at N.A.I.T. complements the highly qualified instructor to make a good technologist.

The benefits are not one-sided. The apprentice is continually in contact with the upgrading influence of an academic environment. He is thus able to understand better the theoretical side of his work, as well as see a facet of the technologist that may not otherwise be seen.

Yes, the apprenticeship program is an important part of N.A.I.T.



ELECTRICAL TECHNOLOGY OFFERS MUCH OPPORTUNITY

During the next half century man's demand for power will have surpassed all previous power consumed to the present. This increased growth in consumption has placed a great demand on the educational institutions for electrical technologists. For the past few years the number of technicians needed has far exceeded the number of graduates.

Because of demand, the electrical technologist has a choice in which part of the country that he wishes to work. A person can, if he so desires, travel on a province-wide basis doing work that is both interesting and challenging as well as obtaining experience in various branches of the electrical industry. The technologist can install equipment, operate equipment or become a maintenance man for an industrial firm. The electrical technologist has a wide range of opportunities open to him. The education that the technologist receives is only designed to open the door to opportunity. After the door is open, it is entirely up to the individual.

In the electrical field, the main industries with which the graduate may find employment are: Calgary Power, City of Edmonton, City of Calgary, B.C. Hydro, Saskatchewan Power, Westinghouse, General Electric, Atomic Energy of Canada, Canadian Chemcell and International Power' Consultants. These industries offer a wide variety of positions from research to the maintenance and design of equipment.

The technologist may also apprentice for two years after successfully completing the course at N.A.I.T. This apprenticeship may be served towards a construction journeyman's certificate or towards a power journeyman's certificate. Both of these fields of endeavour offer a bright future for the graduate entering this type of work.

Opportunities in office work are also available to the graduate. This type of work is usually recommended for the person who does not mind working over a desk all day. This type of work entails the drawing, designing and the estimation of costs of electrical installations. This is a challenge to the individual who prefers this work because of the pressures of competitive firms and the search for originality of specific designs.

The courses taken at N.A.I.T. are designed to give the student a well rounded education in the electrical field. This type of education is not designed to give the student a detailed education but more of a general knowledge so that the technologists will be able to handle any specific problem in the electrical field.

The student will be taught D.C. and A.C. machines; this will give him the theory and some experience in design, as well as the types of construction, and the various methods of using these machines. The stduent will also take instruments (how to use and repair indicating meters), basic electronics (tube and transistor circuits and theory), design (installation design of electrical circuits), and logic controls (solid state theory and labs.) As well as the main electrical courses; the student will also be taught Drafting, Physics, Mathematics, Calculus, and English These courses are essential to the technologics in helping him understand electrical theory and to communicate with engineers and technicians effectively.

The aim of the electrical instructors is to give all students a basic knowledge of the fundamentals and operation of the equipment that a student might encounter in his later years; but, perhaps the most important aim is to train the students to think for themselves.

By JOHN FISHER
Centennial Commissioner

Canada's Centennial, besides being a national celebration, is also a time for reflection on this country's past, its present and the promise it holds for the future.

The potential that Canada has in store for its youth is immense — so immense that in the first 100 years of our nationhood we have only scratched the surface. In the field of science and technology, new methods and new tools are being perfected each day.

Who but a science fiction writer would have dreamed of the laser beam and its implications a decade or so ago? Or of Telecommunications satellites, men walking in space and nuclear generating stations?

Just recently a Canadian scientist disputed Einstein's theory of relativity and set out to disprove a formula which the world has regarded as fact for years.

There is no telling how far you, as young students, can go in the technical field. No limits have been set because the next invention or improved process could open up entirely new vistas.

Canada is committed to the technological race the same as the rest of the world — a race that hopefully will broaden our horizons and improve the lot of mankind.

It is obvious that the Canada of tomorrow will demand all our resourcefullness and an increasing effective use of manpower. For these reasons alone it is important that young Canadians be given — and take full advantage of — the opportunity to realize and develop their maximum capabilities.

Canada is certainly offering the challenge. Now it's up to you to grasp it.

On behalf of the Centennial Commission, may I extend warm greetings to all of you and wish the Northern Alberta Institute of Technology a successful Open House.

EDUCATION OPPORTUNITIES NOW AVAILABLE TO TECHNOLOGY STUDENTS

Vocational opportunities for students attending the Technical Institute of Canada now includes professional education. A comprehensive work-study program is open for young men and women to qualify themselves as vocational teachers, instructors, and research specialists.

The Department of Industrial and Vocational Education, University of Alberta, Edmonton has extended teacher education aimed at recruitment from Vocational High Schools and Technical Institutes. This program is designed to develop the instructors and teachers that are now necessary to meet the demands of a changing productive world.

Heretofore in the Province of Alberta it was necessary to have had from five to ten years practical experience in business or industry before entering the Vocational Education field, to work toward a bachelor of education degree, with a specialty in business education or vocational education. The tremendous value of this real life experience as a background for education is widely credited. Now, however, another route is open.

The unique feature of this new program is that it enables a student to obtain an education degree as well to get an enriched industrial or business experience concurrently, under the supervision of the University. Cooperation of business and industry is an essential part of the program. Reception of the cooperative plan by business and industrial leaders has been highly favourable.

Well paid positions during the summer that parallel the University program can be financially rewarding and at the same time be a rich learning situation. During the work period the University will provide supervision of directed reading and seminars.

The program is flexible to accommodate practically and specialty from electronics to food services to business education.

General requirements — Faculty of Education matriculation.

— a minimum of 30 High School credits in a vocational area of interest or its equivalent in the technical schools.

— The ability to work with people and enjoy it.

Registration in the Faculty of Education Route 2 Vocational Education is under way. It is imperative that students register now in the Ed. Voc. 123 course, which constitutes placement in a position that will provide requisite skills in the students area of specialty. Outlined here is the alternating work-study program. It is flexible, accommodates high school students with vocational credits, technical students and transfer students with university program partially completed.

Ed. Voc. 123 — Supervised Work Experience.

July, August, two weeks in September.

First University Year — middle of September to end of April.

Ed. Voc. 223 — Supervised Field Experience.

May, June, July, August, two weeks in September. 18 weeks.

Second University Year.

Ed. Voc. 323 — Supervised Field Experience.

May to September then continuing for a full year to the next September. 70 weeks.

At this point a student is in an excellent financial position to complete the third University year followed by a final work experience — Ed. Voc. 423. This alternating pattern follows through culminating in a Bachelor's degree in Vocational Education.

Some of the unique features include the following:

1. A student is enable to obtain his education and industrial experience concurrently under supervision of the University.

2. The student's background and education fits him to be employed with confidence in the business or industrial world as well as in the EDUCATIONAL WORLD.

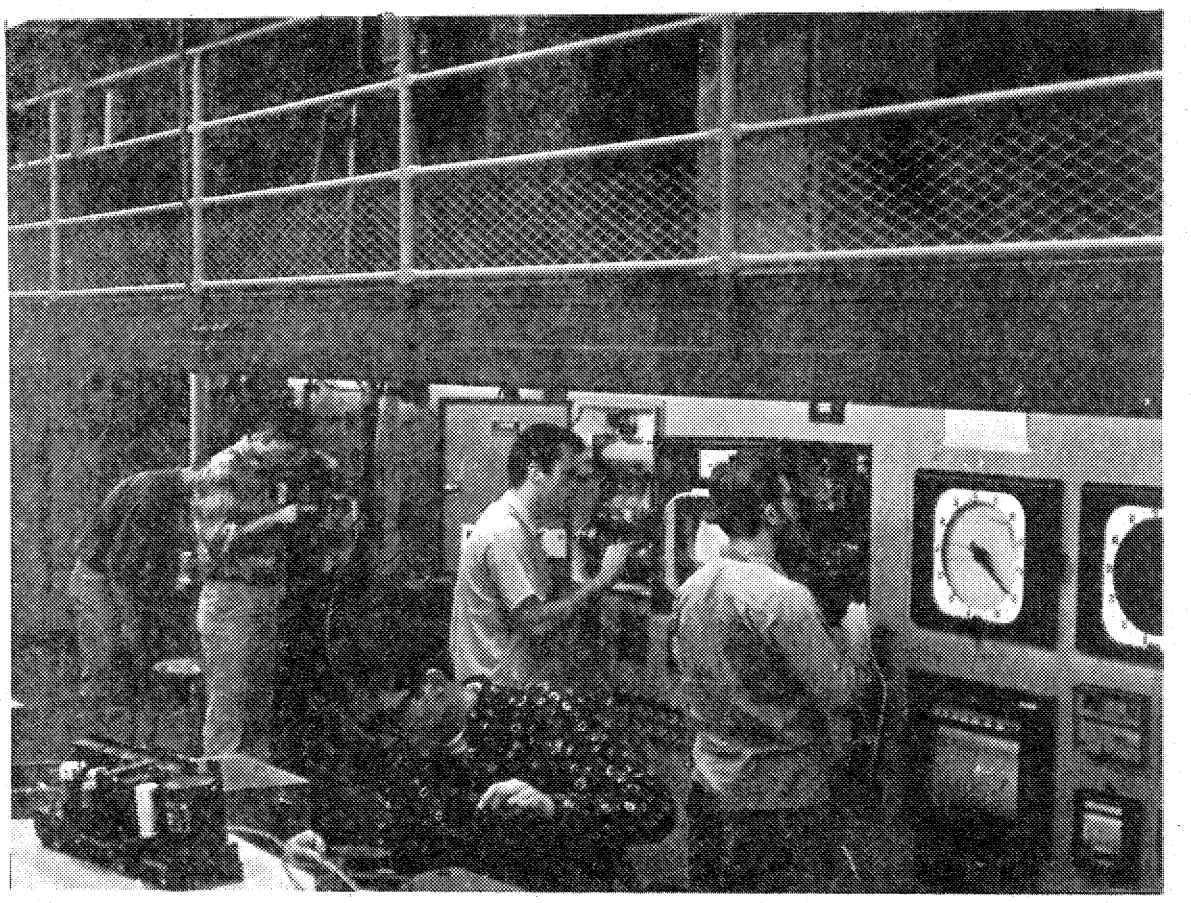
3. The educational career has a wide range of possibilities such as high school teachers, both vocational and academic, technical school instructors and administrators, training officers within industry, adult training, and personnel training for post graduate work and research.

4. The first year of University can be arranged at any University that meets requirements similar to University of Alberta, Edmonton. However the Ed. Voc. 123 course must have U. of A. (Edmonton) approval. Subsequent University courses would be carried on at Edmonton. The work-experience need not be arranged in one place.

Again, it is imperative that applications must be made as soon as possible in order to register in Ed. Voc. 123 course which is the orientation to the program prior to University attendance.

Application for entrance to University must be obtained from the University you expect to attend. Registration for Ed. Voc. 123 must proceed through the Department of Industrial and Vocational Education, University of Alberta, Edmonton.

Brochures and other pertinent information is available through the Guidance and Counselling office at N.A.I.T. or contact Mr. L. J. Shields, Room 231, Education Building, University of Alberta.



Students employing their acquired skills.

INDUSTRIAL PRODUCTION TECHNOLOGY

There are many factors, social, economic and political, which influence the nation's well-being. Chief among them is productivity. Whatever the product, from canned foodstuffs to shoes to rocket fuel, from buttons to trucks to satellites, from ping pong balls to transistor radios, productivity is the key to making them available in sufficient quantity at a price we can afford to pay.

E. S. Roscoe, Professor Emeritus of Industrial Engineering, Pennsylvania State University, states that, "The material standard of living of any nation depends upon production — the conversion of natural resources into useful things." and he illustrates graphically the role of production in the nation's economy.

Industrial Production Technology is founded on such a philosophy and within such a framework.

Whatever the product may be, its existence in quantity, its quality, and its cost are determined by common basic factors ranging from product design and specification to distribution and sales.

The Industrial Production Technologist is concerned with any one or all of the areas. His success rests upon a practical knowledge of materials, design, manufacturing processes, labour, management, capital, and the profit motive. His goals are quantity, quality, and low cost; his means are planning, implementation, and control.

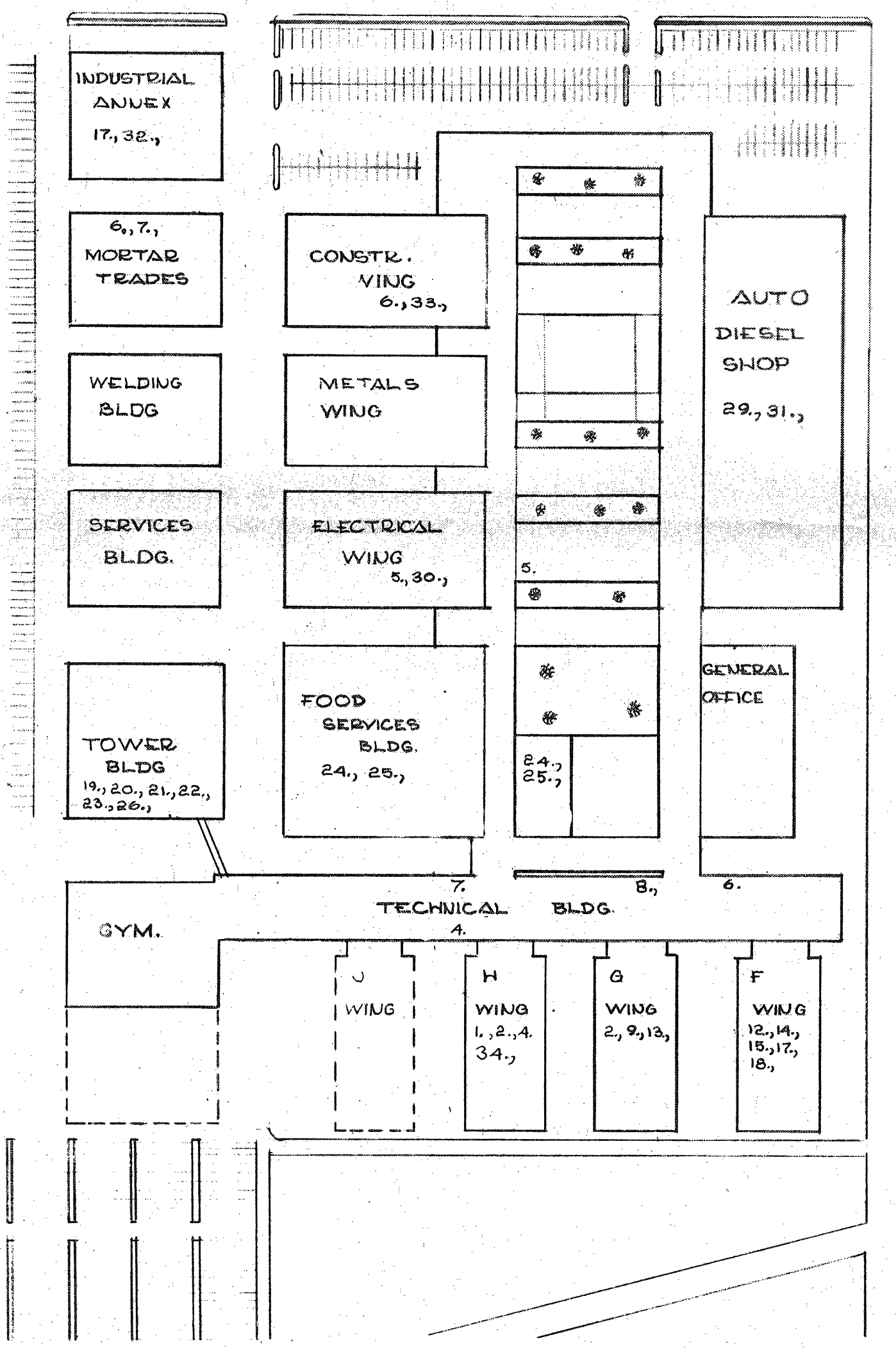
While several institutes offer production options in their Mechanical and/or Manufacturing Technologies, the Northern Alberta Institute of Technology is the only one in Canada offering a complete and separate course. Basically it is a three year program but entrance into the second year is permitted to those applicants having adequate academic and/or industrial background. The first year is largely academic, in preparation for more specialized studies to follow, and includes subjects such as English, Mathematics, Physics, Applied Mechanics, and Machine Shop. Second and third year activities include studies, investigations, and laboratory work in areas such as manufacturing processes, machine design, jig and fixture design, metallurgy, strength of materials, metrology, work study, plant layout, and estimating.

N.A.I.T. has accepted the metals industry as the medium for instruction, not only because so much of the nation's potential is applied in this direction but also because of the variety of machine tools, each with characteristics typical of a wide range of industrial equipment, that can be accomodated conveniently within an educational institution.

Graduates from the program have been well received and are highly respected in industry. Several of them have enjoyed early posting to responsible positions. Demand for graduates is good and is expected to grow as industry in Alberta and across the nation continues to develop and expand to meet the needs of a prospering Canada.

You are invited to visit the Industrial Annex during Open House, March 17 and 18, to see the displays and to learn more about the challenging field of Industrial Production Technology.

Your Personal Guide on Your Tour Through N.A.I.T.



LEGEND: