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MONEY LACK CURBS BUILDING

NRC Grant Establishes New Research Centre

The University of B.C. has been awarded a grant of \$375,000 by the National Research Council to develop a Centre for Materials Research over the next three years.

The Centre will be among the first three in Canada, though such centres have been developing widely in the United States over the last 10 years. Similar NRC grants to the University of Toronto and McMaster University have been announced by NRC in Ottawa.

The three grants, totalling \$1.2 million, are the first made under NRC's new program of Negotiated Development Grants, which NRC says is designed "to help all Canadian universi-

ties to develop research centres of excellence in specific areas of science and technology regarded as of vital importance to Canada."

PIONEERING GRANT

The UBC Centre for Materials Research concept has been under study and development for more than five years by the department of metallurgy. Establishment of the Centre was strongly backed last year by an NRC investigating committee, and formally approved in January by the UBC Board of Governors in anticipation of the pioneering NRC grant.

"The Centre will be developed around the metallurgy department and around the new (\$2.6 million) metallurgy building now under construction and scheduled to go into use next December," said Dr. Edward Teghtsoonian, head of the department of metallurgy.

"However, other appropriate departments will be involved in the direction and operation of the Centre and it will have an outside advisory committee of industrial and government agency representatives.

"The grant will enable us to establish a long-range program in materials research beyond what we are able to undertake with our present resources. It will provide over three years for the purchase of equipment and for increases in our professional and technical staff."

(The grant is payable at \$150,000 in 1967-68, \$150,000 in 1968-69 and \$75,000 in 1969-70).

PRIMARY PURPOSE

Dr. Teghtsoonian continued: "The primary purpose of the Centre will be to stimulate and expand research in the preparation and properties of materials, including metals, ceramics and plastics. The overall orientation will place emphasis on applications to real problems, but research will be undertaken over a broad spectrum, ranging from applied to fundamental research.

"The metallurgy department is a suitable nucleus around which the Centre can grow because of its continuing involvement in research in a wide variety of materials. But other departments of applied science will be involved.

"We hope to encourage much more participation by industry in research projects to be carried out at the Centre. Our increased facilities should stimulate industry to look upon the Centre as a place where research can be done, particularly those industries involved in the production and processing of materials.

ACTIVE CO-OPERATION

"If the interests of industry are to be served, and the university's function as a school of applied science implemented, there should be much more active co-operation between the university and various industries. We expect industries to participate in the Centre through research programs which they will sponsor and people associated with the Centre will carry out."

Dr. Teghtsoonian said that despite limited facilities so far, the UBC department of metallurgy is the largest and best supported at a Canadian university. Since 1962, support from grants and research contracts from industry and government agencies has climbed from \$110,000 to \$260,000 a year.

"Though we have had such programs underway, we haven't had the man-



PROF. RICHARD U. RATCLIFF

UBC Gets Top Land Economist

One of North America's leading urban land economists has been appointed chairman of the division of estate management in UBC's faculty of commerce.

He is Professor Richard U. Ratcliff, 61, currently director of the Urban Land Economics Centre and professor in the School of Business Administration at the University of Wisconsin.

His appointment to the UBC faculty is effective July 1.

FIRST IN FIELD

Dean Philip White, head of UBC's commerce faculty, said the University of Wisconsin was the first to introduce work in urban land economics, and its pre-eminent position in this field has been due to the research and teaching activities of Prof. Ratcliff.

Dean White said: "He is probably the best known urban land economist in North America at the present time and has published several books on this topic and on real estate investment analysis and valuation theory.

"In addition, Prof. Ratcliff has held several research appointments in federal housing bureaus in Washington, D.C., and has acted as consultant on urban land economics to the federal government and the states of Wisconsin, California and Hawaii."

Prof. Ratcliff was born in Madison, Wisconsin, and is a graduate of the Universities of Wisconsin and Michigan, where he received a bachelor of arts degree in economics, a master of business administration degree in real estate management, and his Ph.D. in urban land economics and real estate.

VISITING PROFESSOR

The chairman of the Department of Commerce at McMaster University, Dr. Calvin C. Potter, FCA, has been named a visiting professor in the finance division of the UBC commerce faculty for the coming academic year.

Author of several books, including the recently-published "Finance and Business Administration in Canada," he is a fellow of the Ontario Institute of Chartered Accountants, a member

Working drawings for a major biological sciences building expansion have been received by the University of B.C. Board of Governors, but construction tenders cannot be called until additional building money is committed to UBC, says President John B. Macdonald.

The biological building expansion is to accommodate the departments of botany and zoology, and the Institutes of Oceanography and Fisheries.

"We cannot proceed either on three engineering blocks, for which working drawings are nearing completion, until new money is available," the President said. The blocks are for civil and mechanical engineering, and an engineering common block.

The buildings constitute the major projects in the final one-third of UBC's five-year, \$30 million capital expansion program, undertaken in 1964, to be financed by provincial grants of \$18 million, and \$12 million from public contributions to the 3-Universities Capital Fund Campaign.

"The University advised the provincial government late last year that an additional \$16.5 million is needed to complete the program," Dr. Macdonald said. "If the University receives assurance that this amount will be forthcoming by 1969, we can proceed with the program by short-term borrowing.

DAMAGE MOMENTUM

"Any substantial delay in getting these projects underway, however, will seriously damage the momentum of our expanding graduate and professional training programs, particularly in areas of obviously high importance to British Columbia.

"Graduate and professional enrolment will have to be restricted due to lack of space for highly specialized teaching and research.

"A limit on undergraduate enrolment at the University of B.C. would be logical and is under consideration when a number of other B.C. institutions provide this level of education. But graduate and professional training is the responsibility of the University of B.C. The province will suffer if it must be curtailed due to lack of facilities," Dr. Macdonald said.

"The urgency of pushing ahead with our building program also is underlined by the fact that despite building so far, there is less space than ever at UBC. Enrolment has been rising faster than the addition made by construction to total space — particularly in graduate and professional areas where the individual student requires several times as much space as an undergraduate.

"The pressure for space has prevailed in use nearly all of the famous army huts."

COSTS INCREASE

Dr. Macdonald said the anticipated \$30 million had been cut by an estimated \$3,360,000 because public contributions to the 3-Universities Capital Fund Campaign fell short of the \$28 million objective.

He said preliminary building cost estimates made in 1963-64 had increased by \$4,291,927 in buildings and projects completed or underway.

"These higher costs are due to sharp rises in construction charges," the President said. "I want to emphasize, however, that every economy was observed consistent with the provision of basically adequate long-term buildings."

Dr. Macdonald said that new campus projects which required priority as the capital program proceeded, interest and campaign fund costs, plus contingency reserves, had absorbed another \$2,815,573.

"Thus the final one-third of our capi-



JOHN WALTERS, inventor of unique tree-planting gun, has been named director of UBC's 10,000-acre Haney research forest. See story page eight.

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See BUILDING COSTS LISTED



PROFESSOR of animal husbandry at UBC, Dr. J. C. Berry, standing, came back from Montreal recently burdened with awards captured by UBC Ayrshires at eastern meetings. Ubysey Ivory Loreen, who doesn't seem too happy about having her picture taken, owns one of the three shields held by Dr. Berry and dairy herd manager Barney McGregor. The silver tray held by Dr. Berry is for the highest herd milk and fat average in Canada. Photo by B. C. Jennings.

AT EASTERN MEETINGS

UBC Ayrshires Capture Four National Awards

Ayrshire cows owned by the University of B.C. have captured the major share of production awards for 1965-66 at meetings of the Canadian Ayrshire Breeders' Association.

The UBC Ayrshire herd won three of eight high production shields and a silver tray for the highest herd average in Canada at the Montreal Meetings in February.

Dr. J. C. Berry, professor of animal husbandry at UBC, was at the Mont-

real meetings to receive the shields and the silver tray.

HIGH PRODUCTION SHIELD

Fourteen-year-old Ubysey Commodore Arlene won a high-production shield in the ten years and over class, and a newly-created award, the Diamond Seal Certificate, for her lifetime production of 6,000 lbs. butterfat.

Arlene's daughter, Ubysey Ivory Loreen, received a shield for leading the senior three year old class, and the third shield was awarded to Loreen's paternal sister, Ubysey Ivory Lassie for leading the junior three year old class.

The Ayrshire herd average, for which UBC received the Association's silver tray, was 12,368 lbs. of milk, 581 lbs. fat with breed class average index values for milk and fat of 158 and 181 respectively. (The BCA index values for Canada are 111 and 109).

Other breeds of UBC cows continue to make inroads into Canadian records, Dr. Berry said.

Ubysey Magic Faith, a Holstein, has just completed a four-year-old record that is now being processed in Ottawa. Unofficial figures indicate she will become the new all-time champion 4-year-old milk producer in Canada, a record presently held by her older sister, Agnes, for the Mature Holstein class.

FOURTH RECORD

Jill, a UBC Jersey, added further to her production laurels recently when the Record of Performance office of the Canada agriculture department issued a special 305-day certificate for her fourth successive record at twice the average level for Jerseys in Canada.

Jill's previous record, her third, made as a four-year-old, established her as the highest producing Jersey in Canada with six new all-time marks.

'Air-borne' Physicist Appointed

An "air-borne" physicist who uses balloons and rockets to study the composition and properties of the upper atmosphere of the earth has been appointed a full professor in the University of B.C.'s physics department.

He is Dr. Herbert P. Gush, who joins the UBC faculty July 1 from the University of Toronto. For the past year he has been a visiting assistant professor in the UBC department.

In cooperation with the Canadian Army Research and Development Establishment in Quebec, Dr. Gush has carried out experiments by sending aloft balloon-borne instruments to take upper atmosphere measurements.

He is currently designing an experiment involving instruments to be sent aloft by rocket from the Canadian Army station at Fort Churchill, Manitoba.

Dr. Gush is a graduate of the University of Saskatchewan, where he received the degrees of bachelor of engineering and bachelor and master of arts, and the University of Toronto, where he received his Ph.D.

Ten UBC Professors Get Awards for Study

Ten University of B.C. professors in the humanities and the social sciences have been awarded Canada Council grants worth more than \$63,000 for study in Canada and abroad.

The grants, which range in value between \$5,000 and \$7,500 will be used for research and travel which the recipients will undertake while on leave of absence from UBC in the coming academic year.

Recipients and their projects are as follows:

- Prof. Malcolm F. McGregor, head of UBC's classics department, will spend a year at the American School of Classical Studies at Athens as one of two visiting professors.

He will carry out research on ancient inscriptions dealing with the financial records of the Athenian empire.

- William S. Hart, assistant professor of fine arts, will continue research on the Canadian school of painters known as the Group of Seven, preparatory to writing a book.

He plans to travel to all parts of Canada, including the Arctic, where the Group of Seven painted, and study museum collections in Toronto and Ottawa.

The Group of Seven was the first national movement in Canadian art and included such painters as Lawren Harris, A. Y. Jackson, Arthur Lismer and Frederick Varley. The group held its first show in 1920 and disbanded in 1933.

- Dr. David J. Niederauer, assistant professor of French, will spend next year in Paris preparing an edition of the literary correspondence of Henry de Régnier (1864-1936), an important symbolist poet and novelist and member of the French Academy.

- Dr. Daniel Dorotich, assistant professor of Slavonic studies, will study relations between Yugoslavia and the USSR in the period 1918 to 1941 in libraries and government archives in Belgrade and Nov-Sad, Yugoslavia, and in Budapest, Hungary.

He also hopes to visit Russia to carry out a comparative study of education and culture in the USSR and Yugoslavia.

- Dr. K. J. Holsti, associate professor of political science, will work in Vancouver and in London on a study of five international crises involving a major power and a weak power.

The purpose of his research is to determine how weak nations bargain with more powerful opponents. Among the crises he plans to study are the German-Austrian crisis of 1938 and the Soviet-Finnish crisis of 1939.

- Dr. Walter D. Young, assistant professor of political science, plans to visit Britain where he will work at the London School of Economics before returning to Vancouver to continue preparing the manuscripts of three projects.

He is currently working on books dealing with social protest movements in the Canadian west, a biography of M. J. Coldwell, former leader of the CCF party, and a history of socialism in B.C.

In Britain he will also visit friends of Mr. Coldwell, who was born in Eng-

Navaho Expert Joins Faculty

A world authority on the Navaho Indians of the southwestern United States will join the University of B.C. faculty July 1.

He is Dr. David F. Aberle, who has been appointed a full professor in the UBC department of anthropology and sociology.

Dr. Aberle, currently teaching at the University of Oregon, formerly taught at Harvard and the University of Michigan, and was chairman of the anthropology department at Brandeis University.

The head of UBC's anthropology department, Prof. Harry Hawthorn, said Dr. Aberle was recognized as an outstanding researcher who has made notable contributions to the study of culture and personality, kinship and comparative religion, with special emphasis on the Navaho.

land and educated at the University of Exeter, and consult material on the Fabian Society, which is related to socialist movements in B.C.

- Dr. S. W. Stevenson, assistant professor of English, will be on leave in England carrying out a study of myth in modern poetry. He will consult books and manuscripts on such noted British poets as William Blake in the British Museum.

- Dr. C. W. Ingram, associate professor of English, will work in Oxford, Stratford and Coventry in England gathering material for a book on medieval drama.

- Dr. Alfred Siemens, assistant professor of geography, will study the historical geography of the gulf lowlands district of east central Mexico, a developing area with oil, sulphur and cattle-raising potential.

He plans to spend half the year in Europe, where he will consult historical material in Germany and in the Archives of the Indies in Seville, Spain.

The other half of his leave will be spent in the Gulf lowlands area of Mexico conferring with government officials on agrarian reform and agricultural settlement.

- Dr. Alistair R. MacKay, assistant professor of French, will spend three months in London working at the British Museum before travelling to Paris for the balance of his year's leave of absence. He will consult books and manuscripts in both cities for a book on early 16th century French literature.



DR. ROBERT M. WILL

Economist Wins \$7,000 Fellowship

Dr. Robert M. Will, an associate professor of economics at the University of B.C., has been awarded a C. D. Howe Memorial Fellowship for study in England.

The fellowship, named for a late Liberal minister of trade and commerce, is valued at \$7,000 plus travel grants. Dr. Will's award is one of three made annually to Canadians in any discipline.

Dr. Will has been granted leave of absence in the coming academic year to undertake research in London on the methodology of economics. He will study the approaches and procedures which economists have used in developing new knowledge in their field.

Most of his work will be carried out in the libraries of the London School of Economics and the British Museum.

STUDENTS DRILLED UNTIL LETTER-PERFECT

UBC Laboratory Aids Language Study

The University of B.C.'s language laboratory is really a parade square supervised by a relentless sergeant-major in the form of a tape machine that drills recruits until they are letter-perfect.

This is the way laboratory supervisor Mr. G. "Hal" Johnson characterizes the new facility in the Buchanan building where more than 4,200 students get instruction annually in eleven languages.

The laboratory's three rooms, which seat a total of 150 students at any one time, are busy five days

who often put themselves in the machine's hands and do not resist it.

"Average students are often reluctant to perform in front of a class, and the laboratory is designed to place them in a world of their own, where they are separated from their fellow students and can benefit from individual practice."

Each student taking instruction in the laboratory sits at a small booth and is separated from his neighbours by dividers.

performance with that on the master tapes. In other types, the student is required to answer questions, or to perform word substitution and sentence rearrangement drills."

While students are listening to and repeating the material on the master tapes, language instructors in the central control booth can listen to any individual station for any difficulties students may be having.

If necessary, instructors can cut in to individual stations to instruct without being heard at any of the other stations.

When UBC began laboratory instruction in 1956, tapes were prepared for individual courses by faculty members. Today, most publishers offer companion tape series keyed to lessons in the students' texts.

In selected courses, tapes in the laboratory's library are available for day and night use to students who wish additional practice.

CUSO STUDENTS INSTRUCTED

Students taking extension courses in Spanish, German and Russian use the laboratory one hour per week through the winter session, and the laboratory is open each day during the summer session for use by students registered in language courses.

A small but important function of the laboratory is to provide English language instruction for foreign students attending UBC.

"The same techniques are used for instructing foreign students learning English," Mr. Johnson said. "We set aside three hours a week for this project and students are encouraged to come on their own time when spare stations are available."

Students training for service abroad under the Canadian University Service Overseas program also use the laboratory to learn the language of the country to which they have been assigned.

During orientation programs at International House on the UBC campus in July and August the languages and dialects of far eastern countries are listened to and repeated by the students.

Mr. Johnson, who joined the UBC faculty in 1965, constructed the first small language laboratory in Vancouver in 1950 while teaching French and German at Magee high school.

He said: "In those days no one showed much interest in the project. I had to build a few booths and wire in the tape recorders myself in a cloakroom adjoining the classroom."

At that time the Magee laboratory was the only facility of its kind west of Ontario. Today, 21 Vancouver secondary schools are equipped for language instruction.

Looking to the future at UBC, Mr. Johnson sees the possibility of students being able to dial from anywhere on or off the campus to hear a specific language tape.

'DIAL-A-DRILL' PROPOSED

"Dial-a-drill," as he calls it, could be accomplished relatively easily by simply automating some of the UBC equipment and having specific tapes available on a round-the-clock basis.

He said the laboratory is also investigating the possibility of purchasing portable tape recorders to allow students to listen to tapes in their homes or dormitories.

"The problem at the moment is to find a small, durable machine with simple controls that will play up to half an hour of practice tapes," he said.

The laboratory facilities are presently managed by a Faculty of Arts steering committee made up of Mr. Johnson, Mr. Ronald Beaumont, assistant professor of German, and Mr. Alex Harshenin, assistant professor of Slavonic studies.



THE MEN who manage UBC's language laboratory, where 4,200 students annually receive instruction in eleven languages, are shown in the central control room of the facility in the Buchanan building. Students in the laboratory beyond the windows listen through headphones to tapes being played on the machine at left. Students record the material on a second tape at each station and then rewind the tape

to compare their own performance with that on the master tape. Operators at the console at centre can listen to any individual student and cut in to give individual instruction. Management committee of the laboratory is, right to left, Alex Harshenin, assistant professor of Slavonic studies; Ronald Beaumont, assistant professor of German, and G. "Hal" Johnson, supervisor of the laboratory. Photo by B. C. Jennings.

a week drilling students in the vocabulary, pronunciation, grammar, and idiom of French, Spanish, Portuguese, Italian, Russian, Polish, German, Chinese, Japanese and classical Hebrew.

Research studies have shown that nothing but good has resulted from the introduction of language laboratories, Mr. Johnson said.

ALL STUDENTS GAIN

"Studies have shown that some students gain a great deal, and all students gain something from this form of instruction.

"The brilliant students, of course, look after themselves. Those who benefit most are average students,

Students listen to master tapes, played from a central control room, through headphones, and at the same time record the master tape on another tape at the booth.

After a few minutes of one type of drill, during which the student repeats words, phrases and sentences, he rewinds the tape in his booth and listens to his own voice and the master tape for comparison.

Mr. Johnson said: "The whole philosophy of language laboratory instruction assumes that the student will not be passive. Any program series in which the students merely listens is a waste of laboratory time.

"In some exercises, the student has to listen, repeat the word or phrase, and then compare his own

NATIONAL STANDARD SOUGHT

Fitness Experts Test B.C. School Children

Just how physically fit are young Canadians?

This question has bedevilled Canadian physical educators because, up to now, there have been no national standards against which to measure fitness.

A University of B.C. research team has begun collecting data as part of a national study designed to give fitness experts a standard against which to measure the physical fitness of any individual.

Dr. Stanley R. Brown, associate professor of physical education at UBC, is directing the B.C. portion of the study, which is sponsored by the Fitness and Amateur Sports Directorate of the Federal government's Department of National Health and Welfare.

VISIT SCHOOLS

Dr. Brown, with the assistance of UBC colleague, Dr. Eric Banister, and representatives of Simon Fraser University and Vancouver City College,

is visiting 17 schools throughout B.C. to test 14 students in each school between the ages of 7 and 17. He hopes to complete the tests by April 15, 1967.

The students will be chosen on the basis of statistics established by the Dominion Bureau of Statistics.

Each student will be asked to pedal a stationary bicycle for up to 12 minutes while his or her heart rate is monitored on an electrocardiogram.

"Our aim," said Dr. Brown, "is to measure each student's capacity to do work and to adjust to a work load.

"We can increase the work load by increasing the resistance on the pedals of the bike, thus forcing the student to pedal harder. We will record three separate heart rates at three levels of pedal resistance."

INCREASE HEART RATE

Dr. Brown said that as pedal resistance is increased the student's heart rate will increase and then level off as each person adjusts to the work load.

"If we record a large increase in heart rate in response to a small increase in work load it will indicate that the individual lacks fitness. And by the same token we would conclude that a small increase in heart rate in response to a work load increase would indicate that the individual is physically fit."

Dr. Brown's studies for British Columbia will be correlated with studies from all other Canadian provinces,

and the result will be a national standard against which the performance of any single person can be measured.

Dr. Brown said it is anticipated that the standards would have widespread application in hospitals, schools and youth camps, or in any institution where there is a concern for the physical fitness of young people.

Canada is behind many European countries, notably Sweden, in establishing physical fitness standards, Dr. Brown added.

HOWELL DIRECTS

National director of the study is Prof. Max Howell, a former UBC faculty member and currently head of graduate studies in the Faculty of Physical Education at the University of Alberta in Edmonton.

The study is being supported nationally with grants of more than \$50,000 from the Fitness and Amateur Sports Directorate of the Department of National Health and Welfare.



PROFESSOR James Trotter, left, stands amid \$70,000 worth of new scientific equipment in his crowded laboratory in UBC's chemistry building. Dr. Trotter, who has already received two top international awards for his research, says the new equipment will enable him to reduce analytical work which once took months to a few weeks. Assisting him in

his work in the field of x-ray crystallography are two Ph.D. students, Mr. Simon Whitlow, shown adjusting the complex equipment, and Mrs. Carolyn Williston, who is seated at a console which prepares punch cards for UBC's computer. Mrs. Williston is the daughter-in-law of B.C.'s minister of lands and forests, the Hon. Ray Williston.

NEW EQUIPMENT AIDS RESEARCH

Molecules Yield Secrets of Structure to UBC Chemist

A University of B.C. chemist has installed \$70,000 worth of new scientific equipment which will enable him to reduce the analytical work of months to a few weeks.

Professor James Trotter, 34, will use the new equipment, purchased with grants from Canada's National Research Council, to continue work which has already earned him one of the top international awards in chemistry.

Prof. Trotter works in the field of x-ray crystallography, a highly specialized field of chemistry concerned with determining the structures of molecules.

For his previous work in this field, Prof. Trotter was awarded the Meldola

Medal of the British Royal Institute of Chemistry in 1963. The award is given annually to a chemist under the age of 30 who has done original and distinguished research.

When Prof. Trotter received the medal at the age of 29, it marked the first time it had been awarded to a chemist working in a Commonwealth country outside Great Britain.

In 1965 Dr. Trotter was one of two scientists working in Canada who were awarded research grants from the Sloan Foundation of New York. The award totalled \$15,000 over a two-year period.

In his crowded research laboratory in the basement of UBC's chemistry

building, Dr. Trotter and his research team irradiate microscopic samples of crystals to determine the secrets of their structure. The crystals which Prof. Trotter irradiates with x-rays contain certain molecules arranged in a specific geometrical pattern.

RADIATION DIFFRACTED

When the x-rays strike the sample, the radiation is diffracted in much the same way that light waves are reflected by a mirror. The diffracted rays from the crystal are photographed on highly sensitive film, and by measuring the intensities of the rays at various angles, the research team can indirectly determine the structure of the molecules making up the crystal.

In the past Dr. Trotter's research team has had to make the intensity measurements manually over a period of months before the results could be put onto punched cards and fed into a computer for analysis. The new equipment, which includes automating devices worth \$40,000, will make the intensity observations automatically and transmit them to a companion console which will prepare punched cards directly for the computer.

"The automating equipment will allow us to make observations several times as fast as in the past, since we can operate on a round-the-clock basis. Even more important, it won't make the mistakes that sometimes creep in through human error," he said.

Most of Dr. Trotter's work is in the area of basic research which aims to make a contribution to our basic knowledge of how matter is put together. "On the more practical side," he said, "our work also has value in, for example, medical and biochemical research, since the action of substances in the human body depends on the molecular structures, which we can determine reliably by our x-ray techniques."

GLASGOW GRADUATE

Prof. Trotter joined the UBC faculty in 1960. He holds the degrees of bachelor of science, doctor of philosophy and doctor of science from the University of Glasgow, where he also taught before coming to Canada. He has published more than 120 papers in the field of x-ray crystallography.

Brain Damage Probed

The problems of children with mild brain damage will be investigated at a new clinic established by the University of B.C.'s paediatrics department in cooperation with the Vancouver School Board.

Primarily designed for research, the new Neurological Clinic for School Children will also train specialized personnel and school teachers, according to Dr. John Crichton, assistant professor of paediatrics and director of the clinic.

SELECT STUDENTS

About 20 children a year will be selected to attend the clinic, which will operate at Edith Cavell School, 10th and Cambie.

Dr. Crichton emphasized that the Clinic would not operate as a service project since it would be impossible to deal with the number of children who suffer from some form of mild brain damage. Referral to the clinic will be through family physicians primarily.

He said: "We plan to select about 20 children a year who have difficulty in concentrating or coordinating movements or have specific learning disabilities, for example, reading or number concepts.

"Ideally we would like these difficulties to be picked up by kindergarten teachers, but I expect most of the children accepted at the clinic will be referred initially by local paediatricians.

"We have no figures to indicate how many children suffer from mild brain damage. We think it is quite common, and one paediatrician has told me that he alone could provide a full classroom.

"I expect we will see about 40 children a year, and from these we will select about 20 to attend Edith Cavell



DR. JOHN CRICHTON

School each day for as long as they need special education.

"The clinic will be staffed by a special teacher provided by the Vancouver School Board. The child's education at the Clinic will be geared to his or her disability and it will be our aim to return the child to a normal school setting as quickly as possible."

GAIN EXPERIENCE

Dr. Crichton said the experience gained at the clinic will benefit UBC personnel and local school teachers.

"The research team associated with the clinic, including a paediatrician, a psychologist, and a psychiatrist, will gain valuable experience and training in the management of problems associated with mild brain damage.

"In addition, the teaching techniques developed at the school will be spread throughout the school system to enable teachers to cope with many of these problems in the school setting."

Continuing Education Attracts B.C. Doctors

A total of 2,313 doctors and allied health science professionals registered in 28 continuing medical education courses offered by the University of B.C.'s faculty of medicine during 1965-66.

SIXTH ANNUAL REPORT

In his sixth annual report, Dr. Donald H. Williams, head of the department of continuing medical education, says, "Of B.C.'s 2,448 physicians, 850 registered for at least one course. This represents a 35 per cent participation of the province's practicing physicians — an increase from 625 (27 per cent) in 1964-65.

"When it is considered that the demands of patient care require an average work week in excess of 60 hours, it is remarkable that this number of physicians devote this additional time to keeping up to date."

During the year, nine courses were offered for the allied health professions with a registration of 1,231.

"This also represented a substantial increase over the registration of 998 for the previous year," Dr. Williams said.

Since the department of continuing medical education was established in

1960, its prime aim has been to provide a province-wide faculty of medicine program for physicians in practice. To accomplish this, members of the faculty take courses to within 30 miles of the communities where 97 per cent of B.C.'s physicians practice.

Another goal is to promote the education of the health team by co-ordinating postgraduate courses for allied professional and technical groups.

The department of continuing medical education also assists B.C. hospitals in intern-resident education and encourages enrollment in the faculty of graduate studies for advanced degrees in medicine.

PARTNERSHIP

"The quality of medical care received by Canada's families depends to a large degree on the scholarship of its physicians," says Dr. Williams.

"In B.C., continuing medical education has become a partnership of the UBC faculty of medicine, the medical and allied health professions, teaching and community hospitals, private and public philanthropy, and the government to support and instill the philosophy of life-long learning."

MEMBER OF FIRST UBC FACULTY

52-Year Association With Campus Ends

Professor Emeritus Harry T. Logan, the only member of the original faculty still lecturing regularly at the University of B.C., has announced his retirement from teaching.

When Prof. Logan, who was 80 years old on March 5, meets his classics students for the last time in mid-April, it will mark the end of a 52-year association with UBC as teacher, author, editor, administrator and member of UBC's Board of Governors and Senate.

During that time he has received just about every honor that UBC can bestow, including an honorary doctor of laws degree in 1965 and the Alma Mater Society's Great Trekker Award in 1960.

He was honored yet again by his colleagues and friends on March 6 at a dinner in UBC's Faculty Club. Appropriately, the affair was pre-

track and lacrosse. UBC recently honored his interest in athletics by naming a new practice track for him at the south section of the campus.

As Lieutenant Harry Logan, he helped organize the Canadian Officer Training Corps at McGill College in Vancouver in 1914.

MEMORIZED DRILL MANUAL

"We didn't even have a Canadian army drill manual available when we first organized. Overnight, I memorized the British army manual to drill the students," he said.

With UBC scheduled to open its doors in 1915, Prof. Logan was asked by a committee of students to assist them in drawing up a constitution for the Alma Mater Society.

During the summer of 1915 he worked with the late Sherwood Lett, later UBC's chancellor; Eve-

term came into use somewhat later, during the Trek.

"Certainly we were cramped because of the postwar bulge, but we had one large new stone building and no one in those earliest days referred to the buildings as shacks.

"Everyone expected, of course, that our stay there would be a short one, and when these expectations weren't realized, the students under-took to organize the Great Trek.

"The faculty of that day had no reservations about the Trek. Many of the students involved in it were veterans of World War One who were used to commanding men and organizing far bigger events."

PROTEST SUCCESSFUL

The Great Trek of October, 1922, was a public protest by students to bring pressure on the government to complete new buildings for the University at Point Grey. Construction of the science building (now the chemistry building), begun in 1914, was stopped because of the war.

Students circulated a petition, which was signed by 56,000 persons, organized a parade through downtown Vancouver and marched to Point Grey where they threw rocks, gathered on the site, into the shell of the Cairn which still stands on the main mall in front of the chemistry building. A few days later the petition was presented to the Government by a four-man deputation from the campaign committee.

The student protest was successful. At the 1923 spring session, the B.C. Legislature voted funds to complete the University, and students and faculty moved to the new campus in September, 1925.

Despite the passage of time, Prof. Logan doesn't think students have changed much.

He said: "The same kind of spirit that organized the Great Trek is still part of UBC.

"Students have always been interested in helping the University, and activities such as the second Great Trek of 1958 and the 'Back Mac' campaign of 1963 are part of that tradition."

From 1920 to 1936, Prof. Logan was successively an assistant and associate professor and finally full professor of classics. A highlight of this period for him was his reorganization of the COTC on the UBC campus in 1928, despite strong opposition from many students.

In 1936 he again took leave of absence to become principal of Fairbridge, a coeducational school at Duncan on Vancouver Island for underprivileged British children. From 1946 to 1949 he was secretary of the Fairbridge Society in London, England.

Prof. Logan was first elected to the UBC Senate in 1930, was a member until 1947, and later from 1955 until 1961. He was elected by Senate to the Board of Governors in 1941 and served on that body until 1946.

Prof. Logan returned to UBC in 1949 to head the department of classics until his retirement in 1953.

No sooner had he relinquished the headship of the department than he became editor of the UBC Alumni Chronicle, the graduate magazine. He continued to edit this publication until 1959, while at the same time writing an authoritative, 268-page history of the University, entitled Tuam Est, which was published to mark UBC's fiftieth anniversary in 1958.

CONTINUED TO TEACH

Even after giving up the headship of the department of classics, he continued to teach as a special lecturer, giving courses in alternate years on the Greek philosopher Plato and the Roman poet Vergil.

Prof. Logan believes that B.C.'s schools should have another look at the possibility of expanding the teaching of Greek and Latin and including more ancient history in the curriculum.

"Classical literature," he said, "is full of experiences which have meaning and application to modern life. In a very real sense, all history is contemporary history.

"I don't make a point of giving advice to students, but when I am asked, I tell them one thing only. And that is, to find the kind of work which they will enjoy doing — always.

"There's nothing new in that idea, of course. I learned it from the Greek philosopher Aristotle many years ago.

"I was fortunate to find work that I enjoyed doing. Looking back, I can't remember ever experiencing unhappiness in anything I undertook."



A 52-year association with UBC will end this year when Professor Emeritus of Classics Harry T. Logan, shown above lecturing to his last class of students, retires from teaching. Prof. Logan, the only member of the original UBC faculty still lecturing, reached the age of 80 on March 5. He

formerly headed UBC's classics department and helped a 1915 committee to draft the first constitution of the Alma Mater Society. He has also received an honorary degree from UBC in 1965 and was named "Great Trekker" by the AMS in 1960. Photo by B. C. Jennings.

sided over by Prof. Malcolm McGregor, one of Prof. Logan's students in the 1920s, and the man who succeeded Prof. Logan as head of the classics department in 1953.

Looking back over his career, Prof. Logan believes that the biggest problem faced by UBC today is that of numbers of students.

"You cannot put 17,000 students together on one campus and expect that the intimate teacher-student relationship is going to survive," he said.

Universities, he believes, have to find a way of reestablishing this relationship.

CONTACT WITH STUDENTS

"I've always regarded contact with students as one of the most important aspects of working at a University. After all, you can only follow life by being with the young people who are living it," he said.

Prof. Logan's contact with students began even before UBC opened its doors in 1915 in makeshift quarters in the shadow of the Vancouver General Hospital.

He was appointed lecturer in classics at McGill University College, UBC's forerunner, in 1913, after a distinguished career as a student himself.

Born in Londonderry, Nova Scotia, in 1887, he received his early education in B.C., and took his bachelor's degree with honors in classics at McGill. A Rhodes scholarship took him to St. John's College, Oxford, where he took another bachelor's degree and added a master's degree.

At McGill he captained the track team and while at Oxford participated actively in

lyn Story, who later became Mrs. Lett, and J. E. Mulhern on drafting the constitution, which became a landmark of student autonomy when adopted later that year.

"The overriding concern of everyone who worked on the document was to create an atmosphere in which students were free to run their own affairs," Prof. Logan recalls.

"The students have amended that constitution many times since it was adopted, but the important thing to remember is that its original spirit has remained intact."

When UBC's classes started that fall, Prof. Logan was on leave of absence for service overseas. He served first as a machine gun officer with the 72nd Seaforth Highlanders and later transferred to the Canadian Machine Gun Corps. He was awarded the Military Cross for his war service and mentioned in dispatches.

TAUGHT LATIN AND GREEK

While in England in 1916, Prof. Logan married Gwyneth Murray, a graduate in mathematics of Cambridge University and the daughter of Sir James Murray, editor of the New Oxford Dictionary. The year 1919 he spent writing the official history of the Canadian Machine Gun Corps.

It was not until 1920 that Prof. Logan returned to Vancouver to take up his career as a teacher of Latin and Greek at UBC, which was still housed in temporary quarters in Fairview.

"Nowadays," he said, "people refer to UBC's early buildings as the 'Fairview shacks,' but that

New Astronomy Program Gets University Approval

The University of B.C. Senate and Board of Governors have approved development of a program in astronomy to coincide with construction by the federal government of a new National Institute of Astronomy on the UBC campus.

Approved is development of a majors program within the geophysics department which will allow undergraduate students to concentrate their

studies in astronomy preparatory to graduate work.

The two UBC bodies also approved a change of name for the Institute of Earth Sciences to the Institute of Earth and Planetary Sciences in the Faculty of Graduate Studies.

Students who wish to carry out advanced work in astronomy after completing their first degree will register

in the Faculty of Graduate Studies and work in the UBC Institute.

The UBC Institute will utilize the facilities of the National Institute of Astronomy and the new 154-inch Queen

Elizabeth Telescope to be installed by the federal government on Mount Kobau near Osoyoos to train students and carry out research projects.

The initial federal government facility at the south end of the UBC campus will comprise an optical shop for grinding mirrors for the Mount Kobau telescopes, and eventually the national headquarters for Canadian astronomical activities.

University Government Reports To Be Studied

The University of B.C. Board of Governors has appointed its staff committee to study a series of reports on proposed changes in the system of University government.

The committee has been asked to make recommendations to the Board on changes it considers desirable in

the composition and terms of reference of the Board and of the UBC Senate.

(In general, the Board is responsible under the Universities Act of 1963 for the physical and financial operation of the University, and the Senate is responsible for the academic function.)

Reports to be studied include the Duff-Berdahl Report on University Government in Canada of 1966, commissioned by the Canadian Association of University Teachers and the Association of Universities and Colleges of Canada, and reports of the UBC Faculty Association, Alma Mater Society (the student body), and when available, the UBC Alumni Association (graduates) and a special 12-member committee appointed by the Senate to examine the organization and operation of the Senate.

The Board of Governors staff committee includes Board members Donovan F. Miller, chairman; Richard M. Bibbs and J. Stuart Keate. Ex-officio committee members are Board Chairman Nathan T. Nemetz, Chancellor John M. Buchanan, UBC President John B. Macdonald, Bursar William White and Secretary Gordon S. Selman.

Metallurgy Appoints Professor

One of Canada's leading metallurgists, currently employed by the federal government, will join the UBC faculty of applied science July 1.

He is Dr. Fred Weinberg, head of the metal physics section, mines branch, of the federal dept. of energy, mines and resources. He has been appointed a full professor in the UBC metallurgy dept.

Dr. Edward Teghtsoonian, head of the UBC metallurgy department, said Dr. Weinberg was an expert in solidification of metals which deals with fundamental problems in casting and foundry processes.

His other field of research is plastic deformation, the study of metals under stress, which is related to fabrication processes.

Dr. Weinberg is a graduate of the University of Toronto, where he obtained degrees in engineering physics, physics and metallurgy.

He has been employed by the federal government for the past 15 years.

FROM PAGE ONE

NRC Grant

power or facilities to carry out programs on the scale that the Centre for Materials Research will make possible," Dr. Teghtsoonian said.

Though the Centre hopes to involve B.C. industries, it is interested in industries anywhere, and particularly in Canada, he said. Support from industries invited to be represented on the External Advisory Committee has been encouraging.

Among those accepting so far are Imperial Oil Ltd., Clayburn-Harbison Ltd., Sherritt-Gordon Mines Ltd. and the Noranda Research Centre. Atomic Energy of Canada Ltd. also has accepted. Representation on the committee will be rotated among interested companies and agencies.

Responsibility for day-to-day operations and long-range planning will be exercised by a six-member executive committee including Dean of Applied Science William Armstrong, Dr. Teghtsoonian, Professors of Metallurgy J. A. H. Lund and Ian H. Warren, Professor of Mineral Engineering Jan Leja and Professor of Mechanical Engineering C. A. Brockley.

The NRC announcement said that faculty participating in the Centre will remain eligible for normal NRC grants to individuals for specific projects, and that such grants will constitute continuing NRC support to the Centre after the three-year establishment period.

FROM PAGE ONE

Commerce

of the Quebec Institute, and the Financial Executives Institute of America.

In 1966, Dr. Potter was an official guest of the Institute of Chartered Accountants in England and Wales at its summer institute at Oxford University.

In 1963 and 1964 he was Simon research fellow at the University of Manchester, and was of two Canadians invited in 1960 to a six-week seminar financed by the Ford Foundation at the University of California on new developments in business education.

He received a bachelor of science degree in commerce at Sir George Williams College in Montreal in 1948, and a master of commerce in 1950 and a doctorate in 1954 at McGill University.

Housing Official Appointed

UBC housing administrator Leslie Rohringer has been appointed acting director of residences, President John B. Macdonald announced today. The appointment is effective July 1.

Mr. Rohringer will act for Prof. Malcolm McGregor, the present director, who will be on leave of absence in the coming academic year doing research at the American School of Classical Studies at Athens, Greece.

Mr. Rohringer, 49, was born in Hungary and received the degree of bachelor of architecture in 1941 from the Joseph Palatin Technical University in Budapest.

In 1945 he went to Venezuela where he designed school buildings for the Venezuelan ministry of public works. Subsequently, he worked for the Texas Oil Co. and Shell Oil of Venezuela, designing and constructing exploration camps and residences.

With Shell Oil he was also responsible for food services and maintenance of 2,300 buildings housing more than 6,000 persons.

He joined the UBC staff as housing administrator in 1962.

Graduate Dean To Lecture

UBC's Dean of Graduate Studies, Dr. Ian McTaggart-Cowan, will be among a group of top Canadian scientists who will lecture at Expo 67, the Montreal world's fair.

Dean Cowan is the former head of UBC's zoology department and is nationally known for his wildlife research.

The free Saturday lectures for high school students are being arranged by the Chemical Institute of Canada on a \$25,000 grant from the National Research Council.

The grants cover transportation and translation and demonstration expenses for the lecturers, who will speak in the 375-seat DuPont auditorium on the Expo grounds.

The talks will cover the fields of chemistry, biology, geology, physics, engineering, medicine and mathematics.



DR. CHARLOTTE DAVID, associate professor of education at UBC, has been named president of the B.C. Psychological Association.

Prof. W. Dixon On Sick Leave

The director of UBC's School of Social Work, Prof. William G. Dixon, has been granted sick leave, Dean of Arts Dennis M. Healy has announced.

Dr. George M. Hougham, 44, has been named acting director of the School by the Board of Governors.

Prof. Dixon has been a member of the UBC faculty since 1948. He was named director of the School of Social Work in 1957.

Born in Vancouver, George Millard Hougham received a bachelor of arts degree at the University of Toronto in 1945, and a master of arts degree there in 1948. He received his doctorate at the University of Pennsylvania in 1954.

Dr. Hougham taught at the University of Toronto, the University of Pennsylvania and Carleton University. He was director of research and special projects for the Canadian Welfare Council from 1958 to 1963.

He served with the Bureau of Social Affairs at the United Nations in New York from 1963 to 1965, and was professor at the School of Social Work, Western Reserve University, Cleveland, until he joined the UBC School of Social Work last July as associate professor.

FROM PAGE ONE

Building Costs Listed

tal program either has not materialized or has had to be otherwise committed," the President said.

"In addition, increases in construction charges since 1963, and further such increases which must be anticipated by 1969, plus unavoidable increases emerging during detailed planning, have raised to \$16,376,000 a realistic estimate of the ultimate cost of the

biological sciences building and the engineering complex.

"On this basis, we have informed the provincial government of our need for an additional \$16.5 million to complete our plan by 1969 as scheduled."

Dr. Macdonald listed 1963 estimates and actual final cost estimates for building projects completed or underway as follows:

	1963 Estimates	Final Cost
Commerce and Social Sciences (Henry Angus Building)	\$ 2,538,000	\$ 2,296,785
Education addition	900,000	900,000
Dentistry, including expansion of basic medical science buildings	4,229,000	6,350,622*
Library addition	972,000	977,694
Forestry-Agriculture Complex	3,427,000	4,998,946
Music Building	1,585,000	2,575,842
Metallurgy	1,580,000	2,631,965
Totals	\$15,231,000	\$20,731,554
		15,231,000

\$ 5,500,554*

*Facilities for the new Faculty of Dentistry were undertaken under the five-year plan before establishment of the federal Health Resources Fund to provide building funds for health education, and of complementary provincial health education grants. These funds, however, are contributing more than \$1 million to the final stage of the dentistry facilities, enabling the University to cancel postponement of the last stage, which would materially have prevented the acceptance of students in dental hygiene, and reduced the rate at which dental students could be enrolled. Health education funds will provide the Health Sciences Centre, but are not available for other than health education buildings.

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