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Centre Opens in Downtown Location

Ms. Anne Ironside, above, is the co-ordinator of UBC's new Women's Resources Centre, which opened its doors recently in the main branch of the Vancouver Public Library. The Centre, an off-shoot of the Daytime Program of UBC's Centre for Continuing Education, is supported by an innovative-programs grant from the provincial government and is designed to "help women get from where they are to where they want to be." For details on the Centre and its current programs, see story on Pages Eight and Nine.

New Avenues Open For Indian Education

Mrs. Mary Jane Joe, above, is part of a unique teacher-training program that got underway at UBC this year. She is one of 56 native Indian students from all parts of the province enrolled in the Native Indian Teacher Education Program, which is designed to train native Indians for the teaching profession. The program, funded by a \$150,000 grant from the provincial government, was worked out in co-operation with the leaders in the Indian community. For details on the program, see story on Page Four.

Research Team Looks at GVRD

— SEE PAGES TWO AND THREE

Official Election Notice Issued

— SEE PAGE FIVE

Issues related to the quality of life are what most concern the citizens of the Greater Vancouver Regional District, an area of just over 1,000 square miles encompassing much of the Lower Mainland of B.C. This is one of the major conclusions drawn from a study called the Urban Futures Project, carried out by a team of UBC researchers under the direction of Prof. Walter Hardwick, seated in the picture at right, and bearded Dr. John Collins, standing at right. UBC graduate student Martin Taylor, also standing at right, was responsible for a content analysis of many newspapers published in the GVRD. Picture by Jim Banham.

UBC RESEARCH GROUP ANALYSES GVRD ATTITUDES

By JIM BANHAM
Editor, UBC Reports



Dr. Walter Hardwick doesn't hesitate when he's asked what he regards as the single most important result to emerge from the Urban Futures Project, a three-year study of the attitudes of Greater Vancouver citizens toward the environment they live in.

"There's no doubt in my mind," he says, "that most citizens in the Greater Vancouver area understand the nature and complexity of the urban issues that have to be dealt with if the 'livability' of the area is to be enhanced.

"In fact, when it comes to making policies for the future, I'm prepared to believe that almost any group of 50 citizens could do just as well as a group of experts in the fields of pollution, transportation and housing.

"After all," he adds, "the citizen lives with these issues every day."

Dr. Hardwick, a member of UBC's Department of Geography, started the Urban Futures Project in 1972 with a \$67,000 grant from the federal Ministry of State for Urban Affairs. Co-directing the project with him was Dr. John Collins, an environmental psychologist in UBC's Office of Academic Planning and a member of UBC's Department of Psychology. They were assisted by a host of other UBC researchers who undertook specific studies.

The Urban Futures Project is also a major contribution to the Greater Vancouver Regional District's Livable Region Program, an ambitious project designed to chart the environmental future of the GVRD. (For details on the GVRD, see box on opposite page.)

Dr. Hardwick, who is also a City of Vancouver alderman and one of five city representatives on the board of the GVRD, said that the most important group of issues to emerge from the surveys carried out by the Urban Futures Project can be grouped together under the heading of environmental issues — issues related to the quality of life in the GVRD.

"I think that this sensitivity to environmental issues can be viewed as a tribute to individuals such as Rachel Carson and to the news media," he said. "There's no

question that the ideas and issues that they have raised have completely permeated the public psyche to a point where the environment is of primary importance."

Surveys by the Urban Futures Project team show that issues such as air and water pollution from industry and automobiles are of major concern to citizens, as are questions of congestion caused by automobiles and rapid transit systems.

Dr. Collins, who directed much of the technical work of the project, said that public awareness of the need for a high-quality environment in the Vancouver region is a good example of the news media helping us avoid a catastrophe before it actually confronts us.

"While the public at large sees environmental problems and pollution control as top-priority items, it is generally argued by other experts that Vancouver still enjoys a surprisingly clean environment in comparison with other urban centres of the same size. A considerable amount of credit is due the media for creating this awareness in time to avoid an 'environmental doomsday' here," he said.

Dr. Hardwick is quick to inject a note of caution, however, in interpreting some of the results of the surveys.

"A planner or a politician, when he hears that transportation is a major public concern, might interpret that to mean that the public is prepared to agree to the investment of huge sums of money in construction of freeways and rapid transit systems.

"But the surveys carried out as part of the Urban Futures Project clearly show that citizens in the GVRD tend to personalize problems, whether the issue is one of pollution, housing or transportation.

"When people refer to transportation they mean an irritating stop sign at the end of the street, a delay in crossing Lions Gate Bridge in the rush hour, or lack of parking in downtown Vancouver when they're on a shopping trip."

One of the words that keep popping up when Dr. Hardwick discusses the Urban Futures Project is "livability." The project team, he said, had given a great deal of thought to what people in the GVRD mean when they use the term.

"The term 'livability' has its roots deep in the past," Dr. Hardwick said. "Forty or 50 years ago the citizens of

Vancouver viewed the Shaughnessy area of the city as a quality urban environment. It was characterized as an area of imposing homes, quiet tree-lined streets and beautiful gardens. And the people who lived in that area were those who patronized and supported the cultural life of the city — the museums, art galleries, symphony orchestras, and so on.

"In the last 30 years or so the population in general has improved its standard of living and has come to share more and more of the wealth that our society has created. This increasing affluence has led people to expect to share in the kind of urban environment that characterized Shaughnessy 50 years ago.

"In short," said Prof. Hardwick, "the established wealth of the community created norms that other people aspire to. The citizen of the GVRD in the 1970s sees no reason why his suburban neighborhood should be denied a livable environment, including pleasant streets lined with trees, curbs, sewers, community centres and all the other things that make life agreeable."

This desire for a pleasant environment also extends into people's daily working lives, Prof. Hardwick said. "Fifty years ago the majority of business leaders were prepared to accept substandard working conditions, including grimy offices, dirty noisy streets, etc., because it was an accepted part of the capitalistic work ethic and because most of them were able to retreat to quality environments when the day's work was done.

"Today, with the new affluence of our society, people in general are demanding a quality environment in their everyday working lives — carpeted offices, air conditioning, Muzak, coffee breaks — and this is reflected in most of the public and office buildings constructed in recent years.

"They also see no reason why, when they emerge from their offices, they should be forced to breathe air polluted by bus and automobile exhaust systems and industry; they want the streets clean and free of panhandlers, and they want access to a wide variety of

shops and other amenities where the environment is of a high quality."

This desire for a quality environment can result in some odd twists, Dr. Hardwick added.

When the Urban Futures Project was conducting interviews in the Mount Pleasant district of Vancouver, a major issue at the time was the use to be made of the site of old Mount Pleasant School at the corner of Broadway and Kingsway.

"A group of young people were agitating for the creation of a park on the site," Prof. Hardwick said. "But the local citizens were insisting that the area should be used for a shopping centre.

"The Mount Pleasant area isn't exactly endowed with quality stores and the attitude of the local residents was that they wanted a shopping centre in their area of the same quality as Oakridge or Park Royal or Brentwood."

In short, says Prof. Hardwick, the question of what constitutes livability or quality of life varies even within the GVRD, depending on how local residents perceive the needs of their own area.

Dr. Hardwick said the idea for the Urban Futures Project arose about 1970, a period when there was widespread debate about environmental problems, including such hot local issues as a third crossing for Burrard Inlet, and freeways through downtown Vancouver.

"Almost everywhere in North America at that time there was a feeling of uncertainty on the part of decision-makers about public attitudes," Dr. Hardwick said. "There was a myriad of minority groups pressuring governments at every level and it was difficult to determine exactly what issues the majority of people were concerned about."

During the 1950s and early 1960s, said Dr. Hardwick, there was a consensus in the public mind on a whole series of issues. "Growth, for example, was commonly held to be desirable and important, and this was reflected in industrial expansion, construction of new roads, etc. It was even reflected in the enormous development of the physical plant of this University."

This way of looking at our society came under attack in the late 1960s, Prof. Hardwick said, and resulted in confusion and uncertainty at all levels of industry and government.

"As a geographer I was interested in broad questions of public policy," Dr. Hardwick said. "At the time I was mulling over the project I came in contact with Dr. John Collins, an environmental psychologist in UBC's Office of Academic Planning. He had had some experience with environmental-awareness projects in the United States. We combined our knowledge and launched the Urban Futures Project."

Much of the impact of the project results from its methodology, the ways in which data were collected by the research team.

The five major inputs to the project were:

1. An analysis, over a one-year period, of the local-issue content of 20 of the 35 newspapers published in the GVRD. Newspaper stories were scanned, sorted into topical categories, coded and fed into a computer.

2. A two-hour questionnaire administered to 1,671 of the households in the GVRD. Looked at another way, the questionnaire was administered to one-half per cent of the households in each of the electoral districts making up the GVRD. Responses to the questionnaire were also fed into the computer to see how the concerns expressed by citizens matched up with the newspaper analysis.

3. Nearly 300 non-directed interviews, tape-recorded with people as they travelled to and from work, in their homes, or at public meetings.

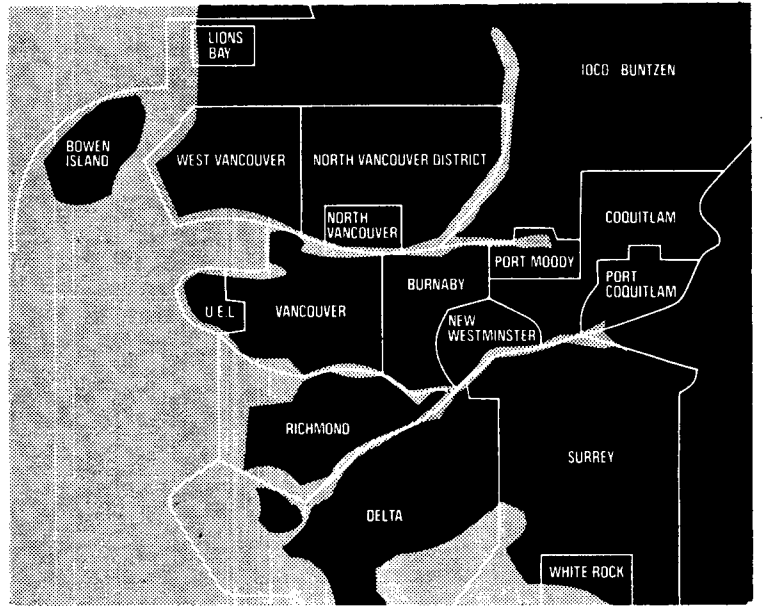
4. A series of interviews with experts and community leaders, people in positions of power who, as Dr. Hardwick puts it, "are supposed to have their finger on the pulse of the community."

5. A series of "encounter-group" sessions, directed by Dr. Robert Ratner, of UBC's Department of Anthropology and Sociology, between the experts and community leaders and GVRD citizens selected at random.

All these inputs resulted in an enormous quantity of data for analysis. On the whole, the two major sources of information — the newspapers and the questionnaire — were in agreement on problems facing the GVRD.

Preserving the environment, transportation, and development proved to be the three issues mentioned most often in the newspapers and the questionnaire

A Concise Guide to The GVRD



Start with an area of just over 1,000 square miles. Cover it with just about every conceivable type of geography, including rivers, tidal inlets, islands, mountains and farmland.

Add more than a million people living in environments varying from built-up urban areas through farms to semi-isolated recreational areas.

Think about the services required — roads, bridges, sewers, schools, hospitals and parks, to name only a few.

Then divide the whole thing into 17 separate communities with differing arrangements for local government and with populations ranging in size from 350 to 426,256 persons.

What you've just read is a bare-bones description of the Greater Vancouver Regional District, an area that encompasses much of the Lower Mainland of B.C. (See map.)

The GVRD extends, on a north-south axis, from the North Shore mountains to the United States border and, on an east-west axis, from Bowen Island in Howe Sound to the eastern borders of Surrey and Coquitlam.

It also includes such tiny enclaves as Lions Bay in Howe Sound, and the University Endowment Lands

between the UBC campus and the City of Vancouver, which is its largest component.

The purpose of the GVRD, which came into existence in 1967, is to tackle problems and provide essential regional services and facilities on a basis of co-operation among the municipalities involved. Among the functions it has assumed are responsibility for regional parks, housing, hospital and regional planning, sewage disposal, water supply and distribution, and air pollution control.

In 1971 the GVRD launched its "Livable Region Program," which aims to determine what livability means to GVRD residents, to find out what they like and what they don't like, what they consider to be the region's problems and how they can best be solved.

A team of UBC researchers headed by Dr. Walter Hardwick, an urban specialist in the UBC Geography department, and Dr. John Collins, an environmental psychologist in UBC's Office of Academic Planning and Department of Psychology, has made a major contribution to the GVRD program with a 1972 study called the Vancouver Urban Futures Project. Some of the results of that study are detailed in the article beginning on the opposite page.

responses, although there were differences in emphasis.

The development issue ("Things like new buildings and Pacific Centres," said Dr. Hardwick) was mentioned almost twice as often in newspapers as in interviews. The transportation and environment issues figured more prominently in interviews than in the newspapers.

Ranking below these three top issues were a group of approximately 10 concerns where there was a high rate of agreement in both newspapers and interviews. Issues included in this group, in rank order, were law and order, politics, recreation, employment, housing, education and health.

At the bottom of the list were culture and eccentricities, the latter category including such things as nude bathing at Wreck Beach and complaints about neighbors.

Dr. Hardwick is quick to point out that the Urban Futures Project found there were significant variations in concern between various regions of the GVRD. "Housing was a major concern in the eastern section of Vancouver, while citizens in outlying municipalities such as Surrey and Delta put emphasis on the need for libraries, schools and health facilities."

Dr. Hardwick also points out that the newspaper content analysis and the interviews were conducted in 1972; issues such as housing, then ranked 10th in a list of 15 concerns, would probably rank much higher in 1974.

Dr. Collins comments that traditional factors such as age, sex, education and income level don't help to explain why some people will rank issues such as housing or economic development high on the priority scale while others rank the same issues low.

The Urban Futures Project surveys show that knowing where an individual lives helps to explain his attitudes. People tend to sort themselves into what Dr. Collins calls "lifestyle ghettos"; in other words, they tend to live in areas where people share similar values that cut across boundaries of age, sex, income, education, family size, etc.

"Perhaps the most interesting thing to emerge from the Urban Futures Project," Dr. Hardwick said, "is the question of which agency is perceived by GVRD residents as being the cause of problems and which agency should be responsible for solutions."

Mr. Martin Taylor, a UBC graduate student who did the content analysis of newspaper stories, also recorded

the agencies most often seen by newspapermen as being the cause or the solution of problems.

"Municipal or local governments, city hall, call it what you will, was the hands-down winner in both categories," Dr. Hardwick said. "Local government was perceived as being the agency most responsible for causing problems and for their solution."

Ranking below municipal governments in terms of causing problems were business, industry, and the provincial government. After municipal government, organizations responsible for solutions were the provincial government, business, industry, and the federal government.

"The point here," Dr. Hardwick said, "is that the agency seen as being responsible for the solution of most problems — local government — is the one which has the fewest financial resources.

"There's no doubt in my mind that if local governments are expected to solve problems there will have to be a substantial transfer of funds from the provincial and federal governments to the local level so that municipal governments can do the job.

"Senior governments have, however, been reluctant to agree to this transfer of funds and the next best solution, it seems to me, is to involve all levels of government in joint ventures in areas such as transportation. The federal government could contribute a lot in terms of transportation technology, while at the local level municipal officials could contribute in terms of local sensitivities and routing."

Dr. Hardwick believes that joint ventures for the solution of problems can be repeated in other issue areas identified in the Urban Futures Project.

Summing up the Urban Futures Project, Dr. Hardwick returns to his point of departure. "There really is a high level of understanding of the nature and complexity of the major problems which have to be faced in the GVRD to ensure a livable environment.

"The so-called experts don't appear to be any more knowledgeable than the public at large. The language of the public may be less sophisticated, but its depth of understanding is equal to that of the decision-makers."

Both Dr. Hardwick and Dr. Collins agree that what are lacking at the moment are plans for solutions to the problems faced by the GVRD. Awareness, they say, needs to be translated into action by employing the best brains available to develop solutions.

Unique Teacher-training Program Opens New Avenues in Indian Education

By JOHN ARNETT
UBC Reports Staff Writer

The group of students that President Walter H. Gage welcomed to the University on a sunny Monday morning in mid-September was unique in the history of UBC.

"The work that you are undertaking," said the President, "is extremely important, perhaps one of the really important things that the University is going to do . . . I wish you all the very best in this very remarkable project."

The President was addressing 56 native Indian students from all parts of the province who had enrolled in the Native Indian Teacher Education Program (NITEP) — a special program designed by UBC's Faculty of Education, in co-operation with leaders in the Indian community, to train native Indians for the teaching profession.

Dean John Andrews, head of UBC's Faculty of Education, who also addressed the students on the first day of a week-long orientation course on the campus, said an indication of the need for the program was that there are only 26 native Indian teachers in B.C. who hold teaching certificates, while last year only two Indians were taking teaching training at UBC.

IMPORTANT PROJECT

"The importance of this project is underlined by the fact that when you people graduate you will triple the number of certificated Indian teachers in the province. And I think that is a revolutionary change in Indian education in B.C.

"We hope . . . that each year there will be more people coming out, to the point where we have something like a proportional number of native Indian teachers teaching our Indian children, and indeed other children in the province, because your certificates will not be restricted to the teaching of native Indian students." He said it has been estimated that if the numbers of Indian teachers were proportionate to the Indian population in B.C. there would be 1,300 teachers.

NITEP, which has been more than a year in the planning stage under the guidance of Dr. Art More, an associate professor in the Faculty of Education, is funded by a \$150,000 grant from the provincial government.

The program departs from the usual in that students will take the first two years of their teacher training at off-campus centres, eventually moving to the University to complete their studies.

Students have been admitted to the program either on the basis of secondary school graduation or as "mature students," a category in the UBC Calendar for students who have not completed secondary school but who it is felt are capable of undertaking University studies, and who have the personalities to become excellent teachers.

In point of fact, said Dr. More, most of those enrolled in the program have graduated from Grade XII and a number have some post-secondary education, either at a university, or at vocational schools or community colleges.

"We were very impressed with both the academic and personal calibre of the people who applied to enter the program," he said. The enrolment had originally been pegged at 45, but the response was so great, and the calibre of those applying so good, that an additional 11 persons were admitted.

The students will be located in four centres around the province — in North Vancouver, Kamloops, Williams Lake and Terrace. The first two steps of the training program will take place at these centres, with emphasis on attaining specified teaching competencies and educational background.

COURSE WORK

Step 3 will consist of formalized University course work. In Step 4, students will complete professional studies under the same regulations as students enrolled in the regular program in the Faculty of Education.

Dr. More said students will receive the Standard Teaching Certificate at the end of Step 3 and the Professional Teaching Certificate, along with the B.Ed. degree, at the end of Step 4.

Dr. More said there is a growing desire among the Indian people to attain greater control and influence over the education of their children. He said that in his travels around the province he has met many native Indians who would make excellent teachers because of their interest in the educational system. However, regular teacher-training programs were closed to them, often because educational deficiencies barred admission or because of the



Mrs. Mary Jane Joe, one of 56 UBC students enrolled in a unique program designed to train native Indians for the teaching profession, gets the undivided attention of a group of students in Norgate School in North Vancouver. Students enrolled in the Native Indian Teacher Education Program are currently training in four off-campus centres operated by UBC under a \$150,000 grant from the provincial government. Picture by Jim Banham.

psychological impact of moving to a university campus of 21,000 students from a community of 90 persons.

Dr. More emphasized that representatives of the native Indian community had a heavy input as members of a special committee established by Dean Andrews to devise the training program.

A UBC Reports survey of students enrolled in the program indicated that perhaps the greatest motivation to take the course was a desire to help their own people.

"What I really want to do is to help my people in some way and I can't think of any better way to do it than becoming a teacher," said Gilbert Shuter, of Merritt, a drafting graduate from B.C. Vocational School in Burnaby, who gave up a good drafting job to take the course.

Dorothy Bourcier, of Williams Lake, who worked as a teacher's aide after taking a one-year course at Cariboo College, said one of the main difficulties that Indian youngsters have in the early grades is learning English.

"I speak Chilcotin as a first language and I had a terrible time understanding the teacher in the early grades. In fact, I never really started to enjoy school until I was in my senior years at high school. By then it is too late for most Indian children because they have dropped out long before that. The young children at least have a chance if they can communicate with the teacher."

Vina Percivale, of Terrace, graduate of a post-secondary secretarial program, said the language

problem was the greatest barrier to success among students in the Nass Valley, where English is a second language for most children.

"We managed to solve the problem somewhat by hiring teacher aides who could speak the Nishga language, but it took three years to do that. Bilingual teachers are desperately needed in the early grades," she said.

BETTER QUALIFIED

Bob Lecamp, of Kamloops, taught in Indian residential schools for seven years. He originally took a year of teacher-training at the Vancouver Normal School, forerunner of the present UBC Faculty of Education.

"I got partly there in my teacher training, now I want to go all the way because I want to be better qualified to help my people," he said.

"I don't want to see them assimilated into the white society, . . . I believe they have a great contribution to make to that society — a contribution that can enrich the lives of everybody, not just the Indian people.

"There have been some excellent white teachers, but too often the white teacher regards the Indian as being intellectually inferior. I think that those of us who are taking this program and those who will follow will definitely prove to all that this is not the case."

Moves Made to Implement New Act

Both the provincial government and the UBC Senate took action in October to implement the new *Universities Act*, passed at the spring session of the B.C. Legislature and proclaimed early in July.

UBC's Senate, at its meeting on Oct. 9, approved recommendations establishing dates for the election of the Chancellor and four Convocation members of Senate and for the election to the Board of Governors of two faculty members, two students and a member of the employed staff.

UBC's Registrar, Mr. J.E.A. Parnall, who is responsible under the new Act for conducting all elections to the Senate and Board, has issued an official notice for the election of the Chancellor and Convocation members of Senate. (See box on this page.)

On Oct. 15 the provincial government named ten persons to the Universities Council, the body created under the new Act to co-ordinate the development of B.C.'s three public universities and act as an intermediary between the universities and the provincial government.

The eleventh member of the Council is Prof. William Armstrong, former deputy president of UBC, whose appointment as Council chairman was announced on Sept. 3.

FIRST MEETING

The Council met for the first time on Monday (Oct. 28). Prof. Armstrong told *UBC Reports* that the Council discussed its powers and terms of reference as well as the establishment of joint committees with the universities.

Four such committees are identified in the Act: committees on business affairs, program co-ordination, graduate studies and research, and capital planning and development.

Members of the Council were also given copies of the proposed budgets for B.C.'s three public universities. The budgets set out the requests of each university for operating and capital grants in the 1975-76 fiscal year.

The Council is empowered to review and co-ordinate the budget requests and will then transmit them to Mrs. Eileen Dailly, B.C.'s Minister of Education, with recommendations on the amount of money to be provided.

The provincial government will announce the total sum it intends to provide for the universities during the spring, 1975, session of the Legislature. The Council will then divide the funds provided by the government and distribute them to the universities.

Prof. Armstrong said it would probably not be possible for the Council to do a great deal of research on the 1975-76 budget requests because of the necessity of making recommendations to the provincial

NOT A CANDIDATE

Chancellor Nathan T. Nemetz, Chief Justice of the Supreme Court of B.C., told *UBC Reports* that he has informed President Walter H. Gage that he will not be a candidate for the post of Chancellor in elections to be held under the new *Universities Act*.

Mr. Nemetz, who has been Chancellor of UBC since 1972, was named Chief Justice of the Supreme Court of B.C. in 1973.

"The post of Chief Justice involves a very heavy work load," Chancellor Nemetz said, "but I nevertheless decided to complete my three-year term as UBC's Chancellor, a period which involved work connected with the new *Universities Act* and the appointment of a successor to President Gage."

Chancellor Nemetz was a member of the Committee established by the UBC Board of Governors to recommend to the Board candidates for the post of President of UBC.

When Mr. Nemetz retires as Chancellor in 1975 he will have served a total of 14 years on the UBC Board of Governors and Senate. He was first elected to Senate in 1957. The same year he was elected by Senate to the Board of Governors and served on that body until 1968. He was chairman of the Board from 1965 to 1968.

Chancellor Nemetz graduated from UBC in 1934 with honors in history.

government in time for the spring session of the Legislature.

☆☆☆

The Oct. 9 meeting of UBC's Senate set Dec. 2 as the closing date for nominations for Chancellor and Senate membership. The election will be conducted by mail ballot and voting papers will be designed to permit machine tabulation of results. Feb. 18, 1975, was set as election day and the results will be reported to Senate at its meeting the following day.

Schedule for election of faculty members to the UBC Board of Governors is:

- Call for nominations — Oct. 15;
- Closing date for nominations — Nov. 1;
- Election Date — Nov. 29.

Election schedule for student members of the Board is:

- Call for nominations — Oct. 23;
- Closing date for nominations — Nov. 6;
- Election dates — Dec. 4, 5, and 6.

Election schedule for the non-academic staff is:

- Call for nominations — Oct. 28;
- Closing date for nominations — Nov. 12;
- Election date — Dec. 10.

Election of faculty members and employed staff will be conducted by mail ballot to campus addresses. Students will vote at ballot boxes located at various points on the UBC campus.

Under the terms of the new *Universities Act* the Board of Governors will be increased in size from 11 to 15 members, including eight persons appointed by the provincial cabinet.

UBC's Senate, on the other hand, will be reduced in size from its current 99 members to 79 members under the new Act.

☆☆☆

The new *Universities Act* prescribes that of the first members appointed to the Universities Council four shall be appointed for a one-year term, four for a two-year term and two for a three-year term. Prof. Armstrong's appointment as chairman is for an initial three-year period.

The four persons who have received one-year appointments to the Council are:

- Dr. Donald MacLaurin, of Saanich, B.C., former vice-president of the University of Victoria;
- Mr. Bob Schlosser, of Port Coquitlam, secretary-treasurer of the Western Canadian Regional Council of the International Woodworkers of America;
- Dr. Frances Forrest-Richards, of Victoria, a University of Alberta graduate and a psychiatrist; and
- Ms. Dorothy Fraser, of Osoyoos, B.C., a free-lance writer and lecturer at Okanagan College.

The four persons who have received two-year appointments to the Council are:

- Mrs. Betty McClurg, of Surrey, a former chairman of the Cariboo College Council;
- Mr. Alex Hart, Q.C., of Vancouver, a former vice-president of the Canadian National Railway;
- Mrs. Rita MacDonald, of Vancouver, a UBC graduate and a member of the provincial Royal Commission on Family and Children's Law; and
- Mr. Bernard Gillie, of Victoria, a member of the University of Victoria Senate and former superintendent of education for the Northwest Territories.

The two members of the Council appointed for three-year terms are:

- Mr. Franklin E. Walden, of Vancouver, a UBC graduate and former president of the UBC Alumni Association; and
- Mr. Ran Harding, of Silverton, B.C., a member of the B.C. Legislature for the New Democratic Party and its predecessor, the Co-operative Commonwealth Federation, from 1945 to 1968 and a member of the federal Parliament for the NDP from 1968 to 1974.

COUNCIL POWERS

Among its many powers the Council has authority to demand from the universities short- and long-term plans for their academic development. It has the power to approve the establishment of new Faculties and degree programs and to require the universities to consult with each other to minimize unnecessary duplication of Faculties and programs. And it has the power to establish evaluation procedures for all academic divisions of the universities.

But certain safeguards of university autonomy are built into the new Act. For instance, although the Council will allocate capital and operating grants to the universities, it cannot require them to use these monies

for any particular aspect of their operations.

In addition, the Council is specifically constrained from interfering with the universities' rights to formulate their own academic standards and policies, to establish their own standards for admission and graduation, and to select their own staff.

The new Act specifies that the Council will try to hold its meetings in public in various parts of the province, and that it will encourage members of the public to express their views and concerns about university matters.

OFFICIAL ELECTION NOTICE

Notice is hereby given that in accordance with the resolution passed by the Senate at its meeting on Wednesday, Oct. 9, 1974, the election of the Chancellor and of the *four members* of the Senate to be elected by the members of Convocation of the University of British Columbia will be held on Tuesday, Feb. 18, 1975.

Nominations for these offices must be in the hands of the Registrar not later than Monday, Dec. 2, 1974.

Candidates eligible to stand for election to the Senate are members of Convocation who are not members of the Faculties of the University.

The attention of those concerned is directed to Sub-sections (1) and (2) of Section 15 of the *Universities Act*:

"(1) All nominations of candidates for the office of Chancellor shall be signed by not less than *seven persons* entitled to vote in the election of the Chancellor.

"(2) All nominations of candidates for membership in the Senate shall be signed by not less than *three persons* entitled to vote in the election of the Senate."

In addition, each nomination must be accompanied by the signature of the nominee indicating willingness to run for election.

In accordance with the *Universities Act* an election register has been prepared of the names and known addresses of all members of the Convocation who are entitled to vote at an election and the register is open to inspection at all reasonable hours by all members entitled to vote.

J.E.A. Parnall,
Registrar.

UBC
REPORTS

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UBC's New Dairy Unit Will Serve Many Purposes

The University of B.C.'s new Dairy Cattle Teaching and Research Unit was officially opened on Saturday, Oct. 26, by the Hon. Dave Stupich, provincial Minister of Agriculture.

Featuring closed-circuit television and a system for removing manure by flushing entire floor areas with water, the unit is a unique structure in the province's agricultural industry.

It will be used for teaching and research and to serve commercial milk producers and the public.

The unit will be used to teach courses in dairy cattle nutrition, physiology, breeding and management to undergraduate and graduate students in the Department of Animal Science in UBC's Faculty of Agricultural Sciences.

Commercial dairy operations almost always have one breed of dairy cattle only. To expose students to a variety of breeds, UBC's unit has Holsteins, Ayrshires and Jerseys.

Larger commercial operations — the trend within the industry — often specialize and don't have animals in various stages of development. The majority of milk producers don't have bulls, for example, and some don't raise calves or heifers.

TEACHING UNIT

The UBC unit has facilities for dairy cattle in different stages of development, for teaching purposes. The unit will accommodate 48 milk cows, 24 heifers, 50 calves, and has stalls and pens for seven maternity cows and for one or two bulls.

"Despite these exceptions," said Dr. Warren Kitts, chairman of UBC's Department of Animal Science, "the unit has been designed as a commercial operation, so that teaching takes place in a realistic environment. The unit operates on a break-even basis with little subsidy from UBC, and it is not eligible for participation in the B.C. Department of Agriculture's dairy cattle assurance program."

The unit will also be used for research by undergraduate and graduate students as well as by faculty members. Fourteen stalls have been provided for animals used in research projects.

"To serve the needs of commercial milk producers, the unit has been designed for maximum efficiency and to try to anticipate and solve some of the problems producers will face in the future," Dr. Kitts said.

"For example, the roughage component — usually hay — of dairy cattle feed may in the future not be grown by dairy farms, usually located close to urban centres, because of a decrease in the amount of agricultural land available. Hay would be bought by milk producers from farms in distant rural areas.

"UBC doesn't have the land to grow its own roughage and so will have the experience of running such an

operation and perhaps solving some of the problems that will come up before individual farmers have to cope with them."

An automatic feeding system portions out rations to cattle on an individual basis, and an elaborate flush system removes manure automatically by flushing water across sloping floor areas.

TOURS PLANNED

With the increasing urbanization of our society, said Dr. James Shelford, assistant professor in UBC's Department of Animal Science, there are children today who have never seen a living cow. The unit is designed to accommodate large numbers of school children and the general public, who will be able to watch modern dairy methods in action.

"A closed-circuit television system with 12 cameras will be used for classroom and visitor use and as a management aid, since the unit, apart from the teaching and research areas, is designed to be run by one man," said Dr. Shelford, who is responsible for the operation of the unit.

"The closed-circuit system could also be a valuable research tool," he said. "It will allow us to observe the behavior of the animals on a 24-hour-a-day basis, simply by playing back video tapes."

Included in the 38,400-square-foot structure are areas and facilities for 144 animals, feed preparation and storage, a milking parlor, milk room, open-air corral, laboratories, classrooms and seminar rooms, and a visitor and display area.

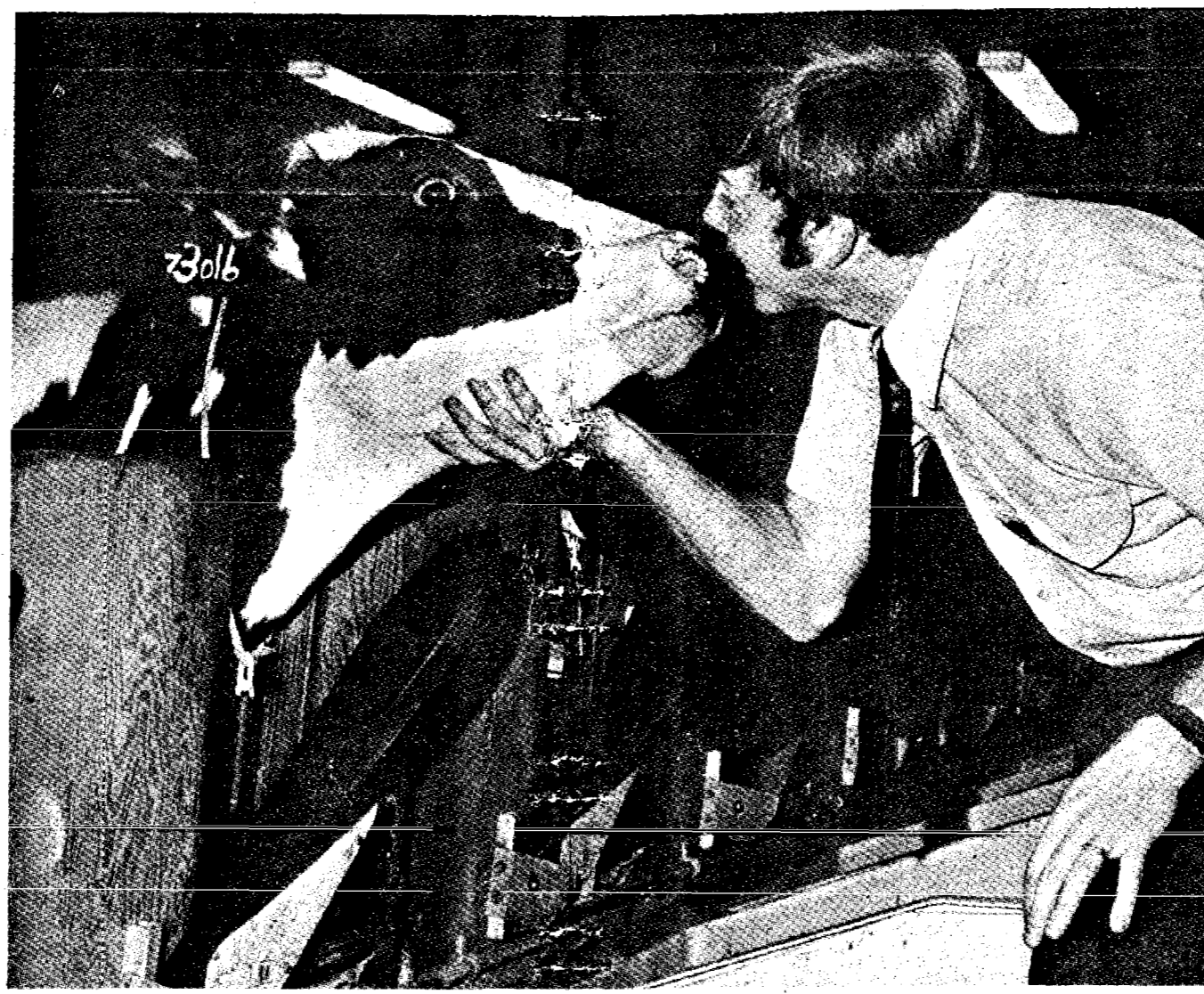
The architect was Ronald B. Howard and the post-and-beam unit was built by Mainland Construction Co. for \$711,338. Total cost of the project was \$821,850.

Part of the financing for the unit came from donations by firms and individuals associated with the agricultural industry as a result of a campaign to raise \$500,000. The campaign was to help finance a number of new facilities for UBC's Faculty of Agricultural Sciences. UBC will contribute \$510,000 towards the new facilities.

LOGICAL MOVE

Dean Michael Shaw, head of UBC's Faculty of Agricultural Sciences, said it was logical that, of the new facilities to be financed by the fund, the new dairy unit should be built first. Milk production is an important sector of the province's agricultural industry, he said, and old dairy facilities on campus had become inadequate.

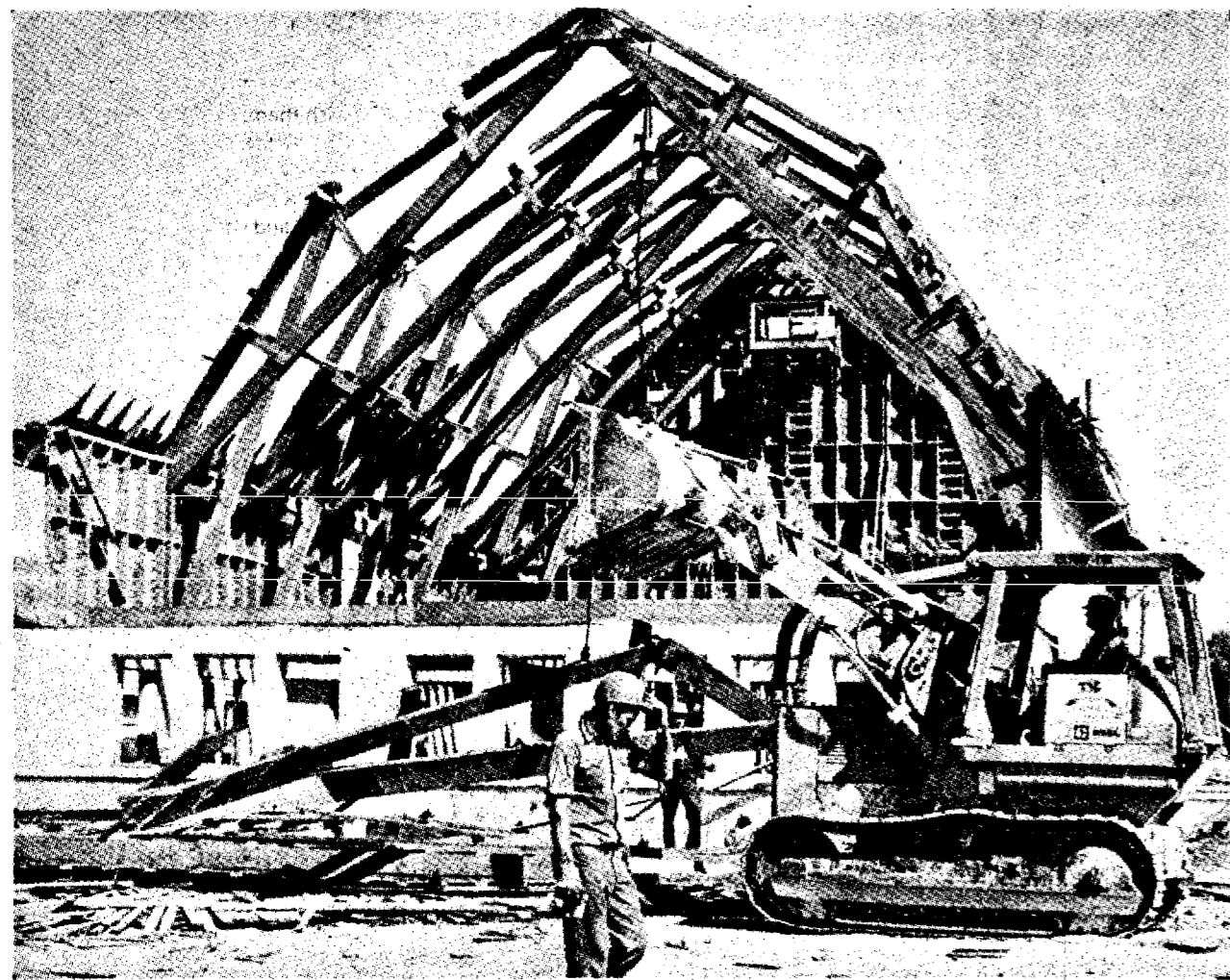
The new unit replaces the old gambrel-roofed dairy barn which was a campus landmark for almost half a century at the corner of the Main Mall and Agronomy Road.



Mr. Paul Willing, farm manager at UBC's Dairy Cattle Teaching and Research Unit, lavishes a little tender, loving care on one of UBC's contented cows. Picture by Jim Banham.



Dr. James Shelford, above, assistant professor in the Department of Animal Science and director of operations at UBC's new Dairy Cattle Teaching and Research Unit, displays closed-circuit television system that permits instant viewing of various parts of the unit, which is designed to be operated by one man. Opening of the new unit in UBC's South Campus research area meant curtains for UBC's old gambrel-roofed Dairy Barn, a campus landmark for almost 50 years at the corner of the Main Mall and Agronomy Road, shown being demolished at left.



Picture by Jim Banham
Picture by Kiri McDonald

Commissioner Named

Prof. Gideon Rosenbluth, of UBC's Department of Economics, has been appointed a one-man commissioner by the provincial government to investigate B.C.'s real estate industry.

B.C.'s Attorney-General, Mr. Alex Macdonald, said Prof. Rosenbluth would look into the industry's code of ethics, the abuse of realtors' licenses, excessive sales staff recruiting and the low return on sales and commission rights.

Prof. Rosenbluth, who joined the UBC faculty in 1962, has taught at Queen's University in Kingston, Ont., and at Princeton and Stanford Universities in the United States. He is a graduate of the University of Toronto and Columbia University in New York.

Two assistant professors in UBC's Department of Economics are on leave of absence to co-ordinate a series of 16 major resource studies for the provincial government.

Dr. John Boyd and Dr. James Rae will co-ordinate the studies of four regions of the province. The studies are designed to plan the economic development of the province and are being carried out under the terms of a federal-provincial agreement announced in March.

Dr. Leonard Marsh, professor emeritus of Education at UBC, is heading a task force appointed by the provincial government to study the feasibility of a new community college in the Lower Mainland of B.C.

The other members of the task force are Dr. J. Gary Dickinson, an assistant professor of Education and chairman of UBC's Adult Education Research Centre, and Mrs. Hilda Symonds, a former member of UBC's Centre for Continuing Education.

Dr. Marsh is the author of a report which led to the establishment of Malaspina College in Nanaimo.

Prof. Cyril Belshaw, of UBC's Department of Anthropology and Sociology, was a member of the Canadian delegation to the 18th session of the UNESCO general conference, which met in Paris at the end of October. Prof. Belshaw spoke for the Canadian delegation during debates on UNESCO programs and policies in the field of culture and the social sciences.

Mr. Paul Roer, assistant professor in UBC's School of Community and Regional Planning, is in charge of a study for the federal Ministry of Transport to test a unique speed-warning device invented by a resident of Prince George.

Basically, the device is a large sign, suspended over a highway, which flashes "too fast" or a similar message to speeding motorists. The new invention, and other similar equipment already on the market, will be tested at six sites on the Lower Mainland.

Dr. Peter Suedfeld, head of UBC's Department of Psychology, has been appointed co-editor of the *Journal of Applied Psychology*, an international journal that publishes empirical and theoretical articles on the application of social and psychological principals to individual and social problems. He has also been named consulting editor of the *Canadian Journal of Psychology*, the journal of the Canadian Psychological Association, which deals primarily with experimental psychology.

Dr. Norman Watt, director of UBC's Summer Session, has been given the Creative Programming Award of the Western Association of Summer Session Administrators for his work in developing a special program for senior citizens on the UBC campus this summer.

The award is the first made to a Canadian by the Association, which has members in Canada's three western provinces, 13 western American states and Mexico.

More than 500 senior citizens attended tuition-free credit and special-interest courses at UBC this summer under a special grant of \$15,000 from the provincial government.

The success of the program attracted continent-wide interest. Dr. Watt has received enquiries from a number of Canadian and American universities which are considering similar programs.

Dr. Brian Little, of UBC's Department of Psychology, is in charge of organizing the convention of the Environmental Design and Research Association, to be held on the UBC campus in the summer of 1976. The international

convention is expected to attract 2,000 to 3,000 architects, urban planners, sociologists, psychologists, engineers, and others from all parts of the world. Dr. Little has also been named to the Board of Consulting Editors of *Man-Environmental Systems*, the international journal for the study of man-environment relations.

Dr. Hugh McLennan, of UBC's Department of Physiology, has been reappointed to the Medical Research Council of Canada for a second three-year term.

The 21-member Council allocates grants and scholarships for medical training and research in Canadian universities.

Mr. Nicholas Weesjes, head gardener in UBC's Department of Physical Plant, was recently selected as a merit award winner in an international competition sponsored by the Professional Grounds Maintenance Society of the United States.

As head gardener at UBC Mr. Weesjes is responsible for the general appearance of the campus in all areas not controlled by UBC's Botanical Garden.

Prof. Park Davidson, of UBC's Department of Psychology and president-designate of the Canadian Psychological Association, represented the discipline of psychology at a national conference on mental health delivery systems in Toronto in early October.

Dr. J.H. Quastel, of UBC's Division of Neurological Sciences, is one of seven medical scientists from around the world who received an award from Canada's Gairdner Foundation on Oct. 25.

Dr. Quastel, who has an international reputation for his research on the brain, is the only Canadian in the group of seven honored by the Foundation in Toronto. The other medical researchers were from the United States.

Dr. Quastel's award carries with it a personal prize of \$10,000.

The Foundation says it makes the annual awards to encourage and reward those who have made contributions to the conquest of disease and to focus attention upon achievements in medicine.

Prof. Robert M. Will, a member of the Economics department, has been named Acting Dean of Arts while Dean Douglas Kenny is on leave of absence from his administrative duties as head of the Arts Faculty. Prof. Will has been assistant dean of the Faculty since 1969.

Dean Kenny, who will become President of UBC on July 1, 1975, said he had requested leave to visit other campuses on this continent "with a view to familiarizing myself with their problems and their means of coping with them."

Dr. Harry L. Purdy, a former president of the B.C. Electric Co. and a Lecturer Emeritus in UBC's Faculty of Commerce and Business Administration, died on Oct. 21 in the Vancouver General Hospital after a lengthy illness. He was 73.

Prof. Purdy joined the UBC faculty in 1961, shortly after the takeover of the B.C. Electric Co. by the provincial government. He lectured in the fields of finance and policy until his retirement in 1973. Dr. Purdy was born in Vancouver. He received his B.A. from UBC in 1926, his M.A. from the University of Washington in 1928, and his Ph.D. from the University of Chicago in 1935.

He taught economics at Dartmouth College in Hanover, New Hampshire, from 1929 to 1940, when he became a research assistant to the U.S. Government Transportation Board in Washington, D.C.

From 1943 to 1946 he was assistant director of research for the Missouri Pacific Railroad. In 1947 he was named director of research for the B.C. Electric Co. and president of the company in 1961.

Dr. Purdy was a former president of the Community Chest and Council of Greater Vancouver. He served as chairman of the executive committee of the board of directors of Canadian Cellulose Co. and chairman of the advisory committee of the Greater Vancouver Regional Hospital District.

He is survived by his wife, Virginia, and two sons, Peter and David.

WOMEN'S CENTRE PROVIDES LINK WITH

By LOIS CRAWLEY
UBC Reports Staff Writer

UBC's Women's Resources Centre promises to become an important link between the University and off-campus women now that its downtown centre in the Vancouver Public Library is open on a full-time basis.

The Centre is the brainchild of Ms. Patricia Thom, director of the Daytime Program, a division of the Centre for Continuing Education, and is a direct extension of that program's involvement with the torrent of new ideas about women's changing roles in society. Ms. Thom describes the Centre as a program "to help women get from where they are to where they want to be."

Funded through a \$25,000 provincial government grant for innovative programs, the Centre offers off-campus women a fairly wide spectrum of lectures, workshops and group-interaction sessions; learning opportunities they need to understand the tremendous changes now taking place in our society.

Located in the heart of the city, the Centre's easy accessibility makes it possible for women to drop in for lectures and informal discussions in small groups. The Centre is staffed by volunteers, most of them UBC graduates, who are doing the very thing that many of the women who visit the Centre are seeking — doing something important outside of their homes.

Ms. Anne Ironside, co-ordinator of the Centre, says of the Centre's methods, "The counselling we provide is directed toward helping women overcome the conditioning they have been exposed to which inhibits them from moving in new directions. Lack of confidence in their abilities often keeps women from developing their potential. We want to help women assess the alternatives available to them, plan new directions and goals and then map out methods to achieve those goals.

"Frequently, women who drop into the Centre to seek individual advice become part of self-development groups — in this way a woman may come to a greater understanding of herself and her life through interaction with other women."

Courses and workshops at the Centre draw upon the talent bank of the UBC faculty to provide varied approaches to the central theme.

For example, Dr. Claude de Martino, of the UBC Department of Psychology, and Sonja de Martino will lead a six-Friday workshop entitled "Exploring Communication with Couples." Dr. Stanley Brown, of the UBC School of Physical Education and Recreation, and Ms. Anne Mills will conduct a workshop, "Reclaiming Body Energy," in which the emphasis will be on practice and experience to realize the goal of integrating mind and body for more harmonious expression.

LIFE SCHEME

Another workshop for couples, "Life Planning," will invite people to pay at least as much attention to planning a life scheme as they do to planning a vacation. It will be conducted by Dr. William L. Davis and Dr. Stephen E. Marks, both counselling experts in the Faculty of Education.

With the assistance of outside resource people, the Centre has put together several sessions designed to expand human awareness, cultivate leadership, explore career opportunities, and so on, which provide a base of choices from which women may establish new life patterns and goals.

"Pack Your Own Parachute: Overcoming Obstacles to Change," a one-day workshop planned around a special film, helps women overcome doubts and hesitations that

hold them back from involving themselves in new interests and activities.

"Thinking It Through," a similarly oriented workshop, combines lecture and small-group discussions to provide information about what is going on in women's consciousness today and how women can use the new ideas to expand their personal and public lives.

Two more-extensive workshops (11 sessions in all) provide chances for deeper exploration into women's selfhood and development of creative energies, with the aim of fulfilling potential in self-chosen goals. The workshops are entitled "Developing Personal Potential, I and II."

Ms. Thom and Ms. Ironside will team up with Ms. Fraidie Martz in 10 two-hour sessions entitled "Career Exploration," oriented toward individual self-evaluation to reveal special talents and skills, coupled with information about the community; these two areas then to be translated into career objectives and strategies to attain those goals.

Also in the career department, five free noon-hour lectures will be held in the downtown library for working women. The course, "Tuning In on the Job Market," covers such areas as "What Are the Economic Rights and Expectations of Women?" "What Are the Job Trends, Present and Future?" "Who Can Help in Finding a Job?" and "The Role of Canada Manpower."

The opening of the Centre's downtown location is the natural culmination of Pat Thom's experience and inventiveness in directing the Daytime Program. It is also a manifestation of the activity that went on in the early '70s within the women's movement.

In September, 1970, Florence Bird's Report of the Royal Commission on the Status of Women was published. In January, 1971, Ms. Thom (who already saw

Deadline Set for Awards Nominations

Nov. 15 has been set as the deadline for nominations for UBC's 1974-75 Master Teacher Awards.

The awards, established in 1969 by Dr. Walter Koerner, a former chairman and member of UBC's Board of Governors, in honor of his brother, the late Dr. Leon Koerner, are intended to give recognition to outstanding teachers of UBC undergraduates.

Winners of the 1974-75 awards will share a cash prize of \$5,000 contributed by Dr. Koerner.

Four Certificate of Merit winners in the 1974-75 competition will each receive a cash award of \$500.

Dr. Ruth L. White, a member of the French department and chairman of the awards committee, said nominations may be submitted by students, faculty members or graduates of the University. Nominations should be sent to Dr. White, c/o the French department, Buchanan Tower, Campus.

Dr. White said the committee is anxious to begin assessment of eligible nominees before the end of the first term of the current Winter Session.

Members of the awards committee, which includes four students, visit the classroom of each eligible nominee, and department heads are asked for an assessment of each candidate in terms of a stringent set of criteria.

Regulations governing the awards and the list of criteria are available from the Office of Academic Planning in the Main Mall North Administration Building; the Woodward Biomedical Library; the Main and Sedgewick Libraries; in Room 270 of the H.R. MacMillan Building; in the AMS business office on the second floor of the Student Union Building; at the UBC Bookstore; in the office of the dean of the Faculty of Law; and at the Biomedical Branch Library at the Vancouver General Hospital, 700 West 10th Ave.

To be eligible for the awards, candidates must have held a full-time teaching appointment at UBC for at least three years and have taught undergraduate classes. Candidates must also be teaching at least one undergraduate course in the 1974-75 Winter Session.

All nominations must bear the name and address of the nominator, who is asked to offer an evaluation of the candidate with the following criteria in mind:

- Having a comprehensive knowledge of the subject;
- Being habitually well-prepared for class;

- Having enthusiasm for the subject, and arousing interest in it among students;
- Establishing good rapport with students;
- Encouraging student participation in class;
- Setting a high standard and motivating students to reach it themselves;
- Communicating effectively at a level appropriate to the student's background;
- In evaluation, laying stress on an understanding of the subject rather than on simple memorization; and
- Being accessible to students outside class hours.

In addition to Dr. White, members of the awards committee are: Dr. R.M. Clark, director of UBC's Office of Academic Planning; Dr. Richard H. Roydhouse, Dentistry; Dr. Donald D. Munro, Forestry; Dr. Dennis Chitty, Zoology; Dean Emeritus of

Education Neville V. Scarfe; Mrs. Beverley Field, representing the Board of Governors; and Miss Margaret Robertson, a fourth-year Science student and one of two undergraduates who sit on the committee. Still to be named to the committee are a second undergraduate student, two graduate students, and two representatives of the UBC Alumni Association.

UBC now has a total of 11 Master Teachers. The first winner was Prof. Walter H. Gage, now UBC's President. Other Master Teachers are: Prof. Chitty; Prof. Geoffrey Durrant, English; Prof. Moses Steinberg, English; Prof. Bryan Clarke, Education; Prof. Peter Larkin, Zoology; Prof. Sam Black, Education; Dr. Floyd St. Clair, French; Dr. John Hulcoop, English; Prof. Malcolm McGregor, Classics; and Prof. Ben Moys, Mathematics.

Clearance Starts Nov. 12

Close to 300,000 new books representing some 60,000 titles will go on sale on the UBC campus on Nov. 12.

The UBC Bookstore's third annual book clearance in Brock Hall will continue until Nov. 30 and will offer books on "just about every topic under the sun," according to Bookstore Manager Bob Smith.

He said about half the books are discontinued academic texts, while the remainder have been purchased from publishers in Toronto and New York.

"There is a particularly wide selection of children's books available this year as well as a variety of fiction and non-fiction in both hardcover and paperback." Also on sale will be reference books, dictionaries, cookbooks and gardening books.

"Everything offered in the clearance is available at tremendous savings," Mr. Smith said. "The buyer's dollar will go farther this year as a result of the removal by the provincial government of the 5 per cent sales tax on books."

Of particular interest to book buyers this year are reprints of volumes that have been unavailable for many years, Mr. Smith said. "The clearance will provide an opportunity for librarians and others to purchase books that have long been out of print."

The annual UBC clearance is the largest of its kind in

Canada and may be the largest in North America, Mr. Smith claims.

Hours of the clearance, which is open to the University community and the general public, are 9:00 a.m. to 9:00 p.m. Monday through Friday, and 9:00 a.m. to 5:00 p.m. on Saturdays.

LECTURE SET

Dr. Helen P. Glass, director of the School of Nursing at the University of Manitoba, will give this year's Marion Woodward Lectureship on Friday, Nov. 15, at 8:00 p.m. in Lecture Hall No. 2 of UBC's Instructional Resources Centre.

Dr. Glass, who has had extensive experience in both nursing and nursing education and has made a research study of their relationship, will speak on "Education and Service: A Developing Relationship."

Marion Woodward Lectures are open to the public and are made possible through the generous support of the Mr. and Mrs. P.A. Woodward's Foundation.

COMMUNITY

participation in the women's movement as part of the Daytime Program) organized the first conference on the Status of Women in order to promote collective discussion of the Royal Commission report. Out of the conference grew the Vancouver Status of Women group.

Again, in May, 1973, the Daytime Program and the Vancouver Status of Women co-sponsored a regional conference. Over 300 women from Manitoba, Saskatchewan, Alberta, B.C. and the Northwest Territories met in Vancouver to discuss opportunities for women. Pat Thom opened the conference and stated its objectives — "To make changes in counselling services, education, training and employment to suit women's needs."

SPACE OFFER

The enthusiastic exchange of ideas and the firm resolution by women to put some of their concepts into practice encouraged Ms. Thom to press on with her ideas for the Centre.

And press on she did. Her persistence ended in the provincial government grant, and that financing, together with the co-operation of the Vancouver Public Library in offering the physical space, brought the Centre into existence.

Ms. Thom is optimistic about the Centre's future. "Very likely the excitement generated by International Women's Year in 1975 will see women's groups increasing their effort to bring about changes, and that surge of energy will stimulate individual women to join groups and attend courses and get with it," she says. "Of course, the success of the Women's Resources Centre will depend as much upon the enthusiasm of the women in the off-campus community as it does upon the continuation of the government grant, but from what I have seen, the enthusiasm is there."



Key figures in UBC's new Women's Resources Centre, which opened its doors recently in the main branch of the Vancouver Public Library, are Ms. Patricia Thom, right, director of the Daytime Program in UBC's Centre for Continuing Education, and Ms. Anne Ironside, centre, co-ordinator of the downtown Centre. They're showing their new quarters to Ms. Lois Crawley, left, a new member of the staff of UBC's Department of Information Services, whose article on the Centre begins on the opposite page. Picture by Jim Banham.

Dark Age Seen for Study of Oceans

The recent Law of the Sea negotiations could drive international oceanography back into the dark ages, according to one of the key speakers at a series of lectures celebrating the 25th anniversary of the University of B.C.'s Institute of Oceanography.

"Perhaps it will be said one day," said Dean W.S.

Wooster of the University of Miami's School of Marine and Atmospheric Science, "that the history of the Institute of Oceanography at UBC coincided by chance with the period when international oceanography reached its highest and most effective level of success."

Dean Wooster's fear for the future of international

oceanographic research stems from current negotiations on jurisdiction over the oceans of the world. Many coastal nations, Dean Wooster said, want to extend their sovereignty to include larger areas of offshore waters. Many of these nations want to control scientific activity as well as the resources in their offshore areas.

Control of scientific research by coastal states will inhibit studies which could increase our knowledge of the ocean, he said, and this could have disastrous results.

"I see forces moving inexorably towards a regime where scientific research in all coastal waters to a distance of 200 miles offshore will be subject to the whim of the coastal states and beyond to the bureaucratic complexities of intergovernmental machinery," he said.

"I believe that our present level of scientific activity in the ocean is entirely inadequate in view of the societal problems developing. These problems arise from the vastly increased magnitude and variety of uses of the ocean and of the human activities that affect the ocean environment.

"We don't know enough to manage these uses and activities intelligently. We could make some very serious mistakes in our ignorance."

Warnings of our ignorance of the sea formed a recurrent theme in many of the nine lectures. In our post-industrial society the ocean remains as bountiful and mysterious to man as it did centuries ago. Though the sea holds enormous promise, some of the speakers said, we should exploit it with caution.

Dr. Robert W. Stewart, a former member of UBC's Institute of Oceanography, said that oceanographic research in the next 10 to 15 years will require greater co-operation among geologists, chemists, physicists, biologists and scientists from other disciplines involved in oceanography.

Oceanography is one of the most expensive of all the sciences, he said. The cheapest ship available to Western Canadian oceanographers costs \$2,000 per day to operate.

Dr. Stewart, director general of the Pacific Region, Ocean and Aquatic Affairs for Environment Canada, said that our knowledge of the ocean is so small that we often don't know what scientific questions research should provide the answers to.

Contract Research Grows

An increasing number of UBC faculty members are doing research under contract to government agencies and private firms.

Since the research is designed to meet the needs of the agencies and firms placing the contracts, the topics are more representative of applied rather than pure research, and many of the projects are aimed at solving immediate problems.

Pure research is usually financed by government agencies that receive requests for money from researchers who suggest their own research topics. Pure research topics are often general in nature and there is no guarantee that the information uncovered will be of direct or immediate benefit.

A good example of applied research now under way is the \$35,000 contract from Utah Construction and Mining to Prof. John B. Evans, head of UBC's Department of Mineral Engineering. Contract funds cover the costs of monitoring the effects of mine waste discharged by Utah into Rupert Inlet on northern Vancouver Island. The project, involving scientists from a number of disciplines at UBC, was requested by the B.C. Pollution Control Branch.

Dr. Robert D. Cameron of UBC's Department of Civil Engineering is studying water seepage from the Burn's Bog Landfill in Delta, the largest garbage dump in B.C., under an \$8,220 contract with the City of Vancouver.

Dr. James Kutney, of UBC's Department of Chemistry, has a three-year contract for \$264,540 from the U.S. National Cancer Institute to try to develop new anti-cancer drugs. Prof. Kutney's laboratory is one of the largest anti-cancer drug labs in the world.

The following list is a sampling of recent contract grants received by UBC. Additional lists will appear in future editions of *UBC Reports*.

SCHOOL OF COMMUNITY AND REGIONAL PLANNING. W.E. Rees — Recreational Carrying Capacity of Trails, Campgrounds and Daily-use Areas: A Literature Review, for Indian and Northern Affairs, \$5,000.

INSTITUTE OF OCEANOGRAPHY. T.R. Parsons — Biological Identification and Sampling of Oil Pollution Materials in British Columbian Coastal Waters, for Environment Canada (Marine Sciences Directorate), \$2,500.

L.A. Mysak — Development of Non-linear Models for the Study of the Dynamics of Babine Lake, B.C., for Environment Canada (Marine Sciences Directorate), \$6,659.

DEPARTMENT OF GEOLOGICAL SCIENCES. W.K. Fletcher — Distribution of Trace Metals in Sediments of the Fraser Delta, for Energy, Mines and Resources (Geological Survey), \$7,800.

DEPARTMENT OF MECHANICAL ENGINEERING. V.J. Modi — Solar Pressure-induced Perturbation of Orbital Elements for a Satellite in an Arbitrary Orbit, for Communications Canada, \$9,200.

T.E. Siddon — Fundamental Study of Source Detection Methods and Mechanisms of High-velocity Jet Noise, for General Electric (Aircraft Engine Group), \$51,860.

FACULTY OF COMMERCE AND BUSINESS ADMINISTRATION. C. Swoveland, I. Vertinsky and D. Uyeno — Cost and Performance which Could Be Expected if Ambulance Service Were to Be Organized on a Regional Basis within the GVRHD, for the Greater Vancouver Regional Hospital District, \$15,200.

DEPARTMENT OF MEDICAL GENETICS. J.R. Miller and B.J. Poland — Reproduction Research: Effects of Oral Contraceptives upon Subsequent Pregnancy, for Health and Welfare Canada, \$54,059.

FACULTY OF FORESTRY. T.M. Ballard and R. Willington — Impact of Timber Harvesting on the Physical and Chemical Properties of Some Forest Soils in Coastal Southwestern B.C., for Environment Canada (Forestry), \$13,500.

S.M. Smith and G.G. Young — Computer Models of B.C. Forests, for B.C. Forest Service, \$55,000.

J.P. Kimmins, R. Willington and T. Northcote — Extension Training Course on Streambank Management for Loggers, for B.C. Forest Service, \$18,000.

J.P. Kimmins — Studies of High-elevation Coastal Forests, for B.C. Forest Service, \$55,000.



Master plan for development of the UBC campus and latest moves to implement the plan will be described at a Nov. 7 meeting in the Henry Angus Building by Mr. Jordan Kamburoff, left, director of the Planning Division of UBC's Department of Physical Plant. Pointing out a feature on huge scale model of the UBC campus is Mr. Neville Smith, director of the Physical Plant department. Picture by Jim Banham.

Master Plan for Campus Subject of Nov. 7 Talk

The latest moves to implement the master plan for development of the UBC campus will be explained at a public meeting to be held at 12:30 p.m. on Nov. 7 in Room 110 of the Henry Angus Building.

Mr. Jordan Kamburoff, head of the planning division of UBC's Department of Physical Plant, will explain the master plan for the campus and describe developments about to take place in the area between Agronomy Road and the extension to 10th Avenue.

Mr. Kamburoff's description of the master plan will be illustrated with slides, and a question period will follow his presentation. The meeting is open to all members of the University community and the general public.

ANNUAL MEETING

Mr. Neville Smith, head of the Department of Physical Plant, said the Nov. 7 meeting would be the first of a series of annual meetings to explain the campus master plan to the University community.

"Many people," he said, "seem to have the idea that the master plan is a rigid, inflexible design for the development of UBC. In reality, the plan is quite the opposite."

"It is founded on a number of generalized, basic concepts, including such objectives as preserving the natural beauty of the campus, directing campus development to avoid inappropriate land use, enabling students and staff to move between buildings in a reasonable period, and patterning pedestrian and vehicle traffic to provide maximum convenience for each."

Another major aim of the plan, Mr. Smith said, is to guide campus development toward achieving a sense of unity and focus.

Mr. Smith said one of the master-plan projects about to be undertaken involves the beautification of the area between Agronomy Road and the extension to 10th Avenue, an area almost exclusively occupied by parking lots.

He said Physical Plant workmen were about to start

planting more than 150 trees in this area as part of a program designed to improve its appearance.

Mr. Smith said that concern expressed by members of the University community had resulted in the University reconsidering plans for development of a parking lot at the corner of the Main Mall and Agronomy Road on the site of the recently-demolished Dairy Barn, a campus landmark for almost half a century.

He said plans for the intersection call for the straightening of Agronomy Road, where it made a jog around the north side of the old Dairy Barn, and creation of a green belt around three sides of the old Dairy Barn site.

"I hope that anyone who has questions about developments on any part of the campus will come to the Nov. 7 meeting," Mr. Smith said. "Everyone who is affected by a plan should be given an opportunity to participate to an appropriate degree in the planning activity."

Mr. Kamburoff, who heads the planning division of the Physical Plant department, has a master's degree in architecture and town planning. Other members of the division include Mr. Jim Jorgenson, a civil engineer and architecture graduate; Mr. Lem Bayly, a civil engineering graduate who serves as a planning analyst; and Mr. Harley Jensen, an art school graduate employed as a draftsman and illustrator. The division hires outside consultants from time to time to advise the University on development of specific areas of the campus.

SCALE MODEL

The division is located in Hut O-4, a converted army hut, which also houses a huge scale model of the UBC campus showing existing and projected developments.

Mr. Smith said the resources of the division and the model are available, wherever practical, to students and faculty members for academic projects. Some students in UBC's School of Architecture are currently using the model for projects.

RECORD INCOME, EXPENDITURE

UBC received and spent record amounts of money in the fiscal year that ended on March 31, 1974.

The University's Financial Statements, reproduced on the opposite page, show that in the fiscal year 1973-74 income from all sources totalled \$111,564,560, plus \$8,253,665 from Ancillary Enterprise Operations.

Most of UBC's income in the last fiscal year — almost \$98.2 million — was earmarked for operating purposes. The biggest single contributor of operating funds was the provincial government, which allocated \$62,720,000 to UBC. In addition, the provincial government gave UBC just over \$6.4 million for new construction on the campus.

Grants totalling more than \$15.2 million from governments, foundations, corporations and individuals for research were the second largest source of operating funds in 1973-74. Research grants made up 15.6 per cent of UBC's total operating income.

Because of the increase in student enrolment, UBC collected \$10,658,410 in tuition fees, as compared to \$9,769,515 in the 1972-73 fiscal year. Student fees as a percentage of income for operating purposes remained static in both years at 10.9 per cent, however.

Expenditures for operating purposes in 1973-74 totalled more than \$95.4 million, compared to nearly \$88.7 million in 1972-73.

Sixty-one per cent of UBC's 1973-74 operating expenditures — just over \$58.2 million — were for academic purposes, chiefly the payment of salaries to teaching and support staff.

Expenditures for sponsored and assisted research were the next largest operating expense, totalling more than \$13.7 million. Other notable operating expenditures were \$5,847,629 for support of UBC's Library system and \$2,330,548 to provide aid to students in the form of scholarships and bursaries.

A statement of UBC's Ancillary Enterprise Operations appears at the foot of the opposite page. Campus Food Services paid \$150,700 in debt charges out of \$156,791 budgeted. Family Housing generated \$41,456 for future development. Four other operations — Residences Food Services, Single Housing Services, the Health Service Hospital and UBC's Oyster River Research Farm on Vancouver Island — incurred deficits and had to be subsidized out of general University revenues.

UBC's Bookstore had a surplus of \$136,646 in 1973-74. This surplus was returned to general University revenues to offset a similar deficit in 1972-73.

UBC's CONSOLIDATED STATEMENT OF FUND TRANSACTIONS

FOR THE YEAR ENDED MARCH 31, 1974

	OPERATING FUNDS			Endowment and Student Loan Funds	Capital Funds	Total of All Funds
	General Purposes	Specific Purposes	Total			
REVENUE						
Operating and Capital Grants — Canada	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
Health Sciences Centre	—	—	—	—	(84,853)*	(84,853)
Asian Studies Centre	—	—	—	—	400,000	400,000
TRIUMF Project	—	—	—	—	3,323,212	3,323,212
— British Columbia	62,720,000	—	62,720,000	—	6,000,000	68,720,000
Health Sciences Centre	—	—	—	—	394,105	394,105
Agricultural Sciences	—	—	—	—	12,000	12,000
Student Fees	10,658,410	—	10,658,410	—	—	10,658,410
Services	3,044,280	1,706,927	4,751,207	—	—	4,751,207
Investment Income	868,656	1,640,533	2,509,189	737,133	1,142,160	4,388,482
Sponsored or Assisted Research	—	15,256,183	15,256,183	—	—	15,256,183
Gifts, Grants and Bequests	—	2,249,611	2,249,611	625,735	822,955	3,698,301
Miscellaneous	47,513	—	47,513	—	—	47,513
Total Revenue	\$77,338,859	\$20,853,254	\$98,192,113	\$ 1,362,868	\$12,009,579	\$111,564,560
EXPENDITURE						
Academic	\$55,797,066	\$ 2,481,088	\$58,278,154	\$ —	\$ —	\$ 58,278,154
Library	5,749,012	98,617	5,847,629	—	—	5,847,629
Sponsored and Assisted Research	(234,800)	14,023,337	13,788,537	—	—	13,788,537
Student Services	1,055,981	321,328	1,377,309	—	—	1,377,309
Fellowships, Scholarships and Bursaries	864,060	1,466,488	2,330,548	—	—	2,330,548
Plant Maintenance, including Renovations and Alterations—\$1,779,518	10,370,801	18,902	10,389,703	—	—	10,389,703
Administration	3,368,861	58,376	3,427,237	3,484	49,725	3,480,446
Land, Buildings and Equipment	—	—	—	—	10,037,404	10,037,404
Total Expenditure	\$76,970,981	\$18,468,136	\$95,439,117	\$ 3,484	\$10,087,129	\$105,529,730
Ancillary Enterprises (Net)	22,309	—	22,309	—	—	22,309
	\$76,993,290	\$18,468,136	\$95,461,426	\$ 3,484	\$10,087,129	\$105,552,039
Excess of Revenue over Expenditure for the year ended March 31, 1974	\$ 345,569	\$ —	\$ —	\$ —	\$ —	\$ —
Net Additions to Fund Balances	—	2,385,118	1,359,384	1,359,384	1,922,450	3,838,727
Inter-Fund Transfers	—	(69,761)†	69,761	69,761	—	—
Fund Balances at April 1, 1973	174,760	9,288,523	24,157,866	24,157,866	14,610,980	66,309,095
Fund Balances at March 31, 1974	\$ 520,329	\$11,603,880	\$25,587,011	\$25,587,011	\$16,533,430	\$69,331,351

*Bracketed figure represents funds returned to the federal government following cancellation of plans to construct Stage 3 of a teaching and research hospital on the UBC campus. The returned funds were replaced by capital grants from the provincial government.

†Bracketed figure represents unused scholarship fund income which was transferred to scholarship-fund capital.

STATEMENT OF UBC's ANCILLARY ENTERPRISE OPERATIONS

FOR THE YEAR ENDED MARCH 31, 1974

	Bookstore	Campus Food Services	Residences Food Services	Housing Services Single	Housing Services Family	Health Service Hospital	University Farm Oyster River	Total All Sources
	REVENUE							
Sales	\$2,206,062	\$1,359,562	\$ 273,484	\$ 26,885	\$ 59,949	\$ —	\$258,098	\$4,184,040
Rentals and Meal Passes	7,435	59,191	884,448	2,382,953	502,340	—	2,360	3,838,727
Hospital Revenue	—	—	—	—	—	230,898	—	230,898
	\$2,213,497	\$1,418,753	\$1,157,932	\$2,409,838	\$562,289	\$230,898	\$260,458	\$8,253,665
EXPENDITURE								
Cost of Merchandise Sold	\$1,580,177	\$ 548,495	\$ 629,986	\$ —	\$ —	\$ —	\$ —	\$2,758,658
Salaries and Wages	358,121	604,072	421,851	710,681	71,234	154,533	89,517	2,410,009
Fringe Benefits (including Board Allowance)	19,253	39,449	25,505	30,586	4,169	7,082	6,422	132,466
Dietary Service	—	—	—	—	—	29,314	—	29,314
Utilities	9,631	—	19,926	221,541	64,907	4,051	6,584	326,640
Other Operating Expenditures	71,009	76,037	44,276	321,813	89,499	19,833	163,991	786,458
Development of Facilities	—	—	—	26,275	10,867	28,963	—	66,105
Debt Repayment, including Interest	—	150,700	45,534	1,323,061	280,157	—	—	1,799,452
	\$2,038,191	\$1,418,753	\$1,187,078	\$2,633,957	\$520,833	\$243,776	\$266,514	\$8,309,102
Net Operating Margin for Year	\$ 175,306	\$ —	(\$ 29,146)	(\$ 224,119)	\$ 41,456	(\$ 12,878)	(\$ 6,056)	(\$ 55,437)
Reserved for Future Debt Repayment	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
Accumulated Reserve from Previous Years	—	—	—	156,005	—	—	—	156,005
Reserved for Future Development	38,660	—	—	42,761	41,456	—	—	122,877
Excess of Income over Expenditure for the Year Ended March 31, 1974	\$ 136,646**	\$ —	(\$ 29,146)	(\$ 110,875)	\$ —	(\$ 12,878)	(\$ 6,056)	(\$ 22,309)

**University general revenues have been reimbursed \$136,646, representing loss sustained by the UBC Bookstore in the 1972-73 fiscal year. This loss was absorbed by UBC on the understanding that UBC general revenues would be reimbursed from future Bookstore profits.

UBC ALUMNI Contact

PREPARED FOR UBC REPORTS BY THE UBC ALUMNI ASSOCIATION



UBC Tutorial Centre Co-ordinator Gary Forsgren, seated, signs up first-year Science student Walter Mackie for tutoring. Picture by Kini McDonald.

Tutors Aid UBC Students

"Is this where I register for the Tutorial Centre?"
"Yes."

"I know there's a registration fee of a dollar, but that's all I've got and I need to buy lunch."

"O.K., pay us later," says Gary Forsgren, UBC Tutorial Centre co-ordinator, as he signs up another tutor for his pool of academic talent.

The Tutorial Centre idea grew out of a student tutorial program begun in campus residences several years ago. The program expanded to a campus-wide basis four years ago when the Centre moved to the Student Union Building under the sponsorship of the UBC Alumni Association, which supplied a grant for a co-ordinator's salary and administrative and publicity assistance. This is the third year that the Centre has worked in co-operation with Speakeasy, the student-run information and assistance group.

Initially, many students seek help from their professors when they get behind in a course. But sometimes the problem can't be handled in a simple office visit. That's where the Tutorial Centre comes in. It acts as a clearing house, matching up tutors with knowledge-hungry students.

"This year," says Mr. Forsgren, who is a fourth-year Physical Education student, "we have had over 200 prospective tutors and students wanting help sign up with the Centre. We try to get help for everyone who asks, and so far we've been fairly successful."

Students and tutors come from virtually every area of the University and both are charged a \$1 registration fee, refundable if the Centre fails to find a student for the tutor or a tutor for the student.

All other financial arrangements are between the student and tutor, whose fee depends on the expertise and the level of teaching required.

The tutors are usually senior or graduate students, who are contacted at the beginning of the year by letter. In cases where a tutor in a specific subject is not available, notes posted on Faculty bulletin boards usually get quick results.

Students often come looking for help because they lack, for a variety of reasons, background in certain subjects. Many requests come from mathematics and science students, but not all. There's even been a request for Sanskrit instruction. (Yes, there's a tutor available.)

This year, more and more Vancouver schools and colleges are using the resources of the Tutorial Centre by referring their students for assistance. But there are some areas that the Centre is not set up to help, such as the student who wanted lessons in conversational Dutch. "We're not the place for that," says Mr. Forsgren, "but I do have a catalogue of local ethnic groups, so I could tell her who to contact."

There's help available too for UBC students whose finances are a bit too thin to afford a tutor, but who

really need help. Mr. Forsgren says he has had professors and graduate students volunteer to tutor without fee.

At the moment the Tutorial Centre seems to have lots of satisfied customers and would be happy to have more. As Mr. Forsgren puts it, "I'm just waiting for the deluge before Christmas exams."

Students and tutors who want to get in before the rush can register from 12:30 to 2:30 p.m. weekdays at the Tutorial Centre in the main concourse in SUB. Information on the Centre can be had anytime from Speakeasy, 228-3777 or 228-4557.

Branches Hear UBC Speakers

Alumni Branches, east and west, are in full swing with their fall programs.

UBC's president-designate, Dean Douglas Kenny, made his first visit to an alumni branch on Oct. 25, when he was guest speaker at a Kelowna luncheon for Okanagan alumni. He was accompanied by Gordon Blankstein, Alma Mater Society president, who introduced Dean Kenny to the audience. Kamloops-area alumni have been invited to meet Dean Kenny and Mr. Blankstein at a Nov. 15 event in Kamloops.

"Higher Education, Soviet Style" was the topic of UBC's Dean of Science, Dr. George Volkoff, when he addressed Kitimat, Kemano and Terrace alumni at an Oct. 28 meeting at the Kitimat Museum. The evening was sponsored by the continuing education department of School District 80.

The same day, several thousand miles away, John Parks, alumni branches committee chairman, was bringing Montreal alumni up to date on UBC with a new slide show.

In Toronto, on Nov. 1, UBC geneticist Prof. David Suzuki will be special guest at an alumni luncheon at the Downtown Holiday Inn. His topic is "Genetics and the Destiny of Man." For information and reservations contact David Papau, 362-4433, or Jack Quistwater, 823-2110, in Toronto.

California alumni are working on final plans for their fall meetings. San Francisco alumni meet on Friday, Nov. 22, and Los Angeles alumni on the following day. Special guest at both events will be Dr. Margaret Fulton, UBC's new Dean of Women. For information on Dean Fulton's San Francisco visit, call Steward Dixon, 981-4577, or Norm Gillies, 474-7310. Information on the Dean's Los Angeles visit is available from Don Garner, 482-2000, Local 1225.

Nominations Call Goes Out

The call is out for nominations from alumni for the office of Chancellor of UBC and for the four Convocation seats on the University's Senate.

UBC's Senate, at its Oct. 9 meeting, approved dates for elections to the Senate and Board of Governors necessitated by the passage of the new *Universities Act* at the spring session of the B.C. Legislature.

The Act, which changed the structure of the Board of Governors to include elected representatives of faculty, students and employed staff, also altered the composition of the Senate. The number of graduates elected by Convocation to Senate has been reduced from 15 to four and direct representation to Senate from the Alumni Association Board of Management has been eliminated.

"In previous years alumni and community views have been well represented by the Convocation members of Senate," said Mr. Chuck Campbell, Alumni Association president. "Our reduced representation has emphasized the importance of encouraging alumni who are committed to the idea of promoting excellence at this University and who are prepared to take an active part in the work of Senate to put their names forward for election. Alumni participation has never been more important than in this year's election. Only through strong participation will we be able to show how under-represented we are on Senate."

The present Chancellor, Mr. Nathan Nemetz, Chief Justice of the Supreme Court of B.C., will retire in 1975 after a three-year term. "UBC has been fortunate to have had persons of the calibre and commitment of Mr. Nemetz and his predecessors as Chancellor. We hope that candidates of similar qualifications will come forward for this election," said Mr. Campbell.

The Chancellor, who confers all University degrees, is a member of both the Board of Governors and the Senate. Nominations for Chancellor must be signed by not less than seven eligible convocation voters. One provision of the Act is that the Chancellor must not be employed by the University.

Candidates for the Convocation seats on Senate must have their nominations signed by at least three eligible voters. Faculty members are not eligible for the Convocation Senate seats.

All nominations must be received by the University's Registrar, Mr. J.E.A. Parnall, by Monday, Dec. 2, 1975. The election will take place by mail ballot on Feb. 18, 1975. Alumni wishing more information may contact the Registrar's office, 228-3159, or the executive director of the Alumni Association, Mr. Harry Franklin, 228-3313.

NEW ADDRESS?

... or maybe a new name?

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