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JOBS: THE 1973 OUTLOOK

By JIM BANHAM
Editor, UBC Reports

Anyone who attempts a survey of employment prospects for UBC's 1973 graduating class is likely to be reminded of the classic cartoon about the parson's egg that once appeared in *Punch*, the British humor magazine.

The parson, who is depicted visiting one of his parishioners for tea, is shown choking down a partly rotten soft-boiled egg.

Asked by his hostess if he is enjoying his egg the parson replies: "Oh, it's very good — in parts."

Much the same can be said of the employment outlook for 1973 graduates — parts of it are very good but others are rotten and are likely to be worse than in the past.

GOOD PARTS

First, the good parts.

Graduates of professional Faculties such as Commerce and Business Administration, Education, Forestry and Applied Science will find that there will be adequate job opportunities and, in some cases, a significant improvement over 1972. Graduate students obtaining master's and doctor of philosophy degrees in the Faculty of Science are also likely to experience improved job prospects, particularly if they have a specialty in some area dealing with ecology or the environment.

And now for the bad parts.

Indications are that students in most departments of the Faculty of Arts and Science who will earn their bachelor's degrees this year will find employment prospects even worse than in 1972.

Many of those graduating from professional Faculties and Schools will find that they will have to relocate or obtain positions in rural areas if they want work. Officials at UBC and in professional organizations emphasize repeatedly that there are jobs available providing the graduate is mobile and prepared to go anywhere.

These generalizations were gleaned from recently published newspaper and magazine reports, talks with UBC deans, professors and department heads and executives of professional organizations, as well as interviews with officials in UBC's Office of Student Services.

The latter office, in addition to providing career and other forms of counselling for students at all



levels, also operates a Placement Office which, among other things, aids students in finding jobs and provides facilities on campus for representatives of professions and industry to interview students.

Both Mr. A.F. "Dick" Shirran, director of the Office of Student Services, and Mr. J.C. "Cam" Craik, UBC's Placement Officer, say that interest on the part of industry in the recruitment of University graduates increased after the 1972 Christmas break.

Mr. Craik says that so far this academic year a total of 201 recruiting teams from industry have visited the campus to talk to graduating students, the bulk of them from firms in the fields of engineering, commerce and forestry. Last year a total of 194 recruiting teams came to the campus.

"The halcyon years of the mid-1960s, when recruiting teams from industry would visit the campus for up to a week to see anyone who walked in, are over," according to Mr. Shirran. "Today, many prospective employers list their requirements and invite applications through our office. They then pre-screen all the applications and invite selected students to meet them here for intensive interviews before making their selection."

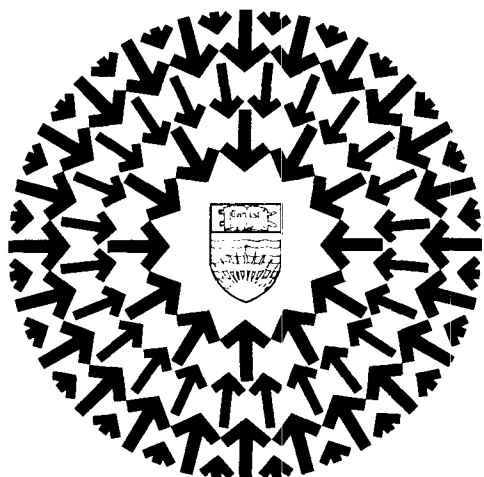
SURVEY DONE

Last year Mr. Shirran did a study of the post-graduation activities of students from seven UBC Faculties and one School in an attempt to provide information about the opportunities available for UBC graduates with different types of training. The Faculties of Commerce, Forestry, Applied Science, Law, Pharmaceutical Sciences, Arts and Science and the School of Home Economics were included in the survey.

A questionnaire was sent to the 1,941 graduates and replies were received from 1,658, a response rate of almost 85 per cent. The data were collected during September, October and November, 1972, or within four to seven months after graduation.

The results of the 1972 survey show that there was an improvement in the unemployment rate for both Forestry and Commerce graduates when the 1972 data were compared to the results of similar

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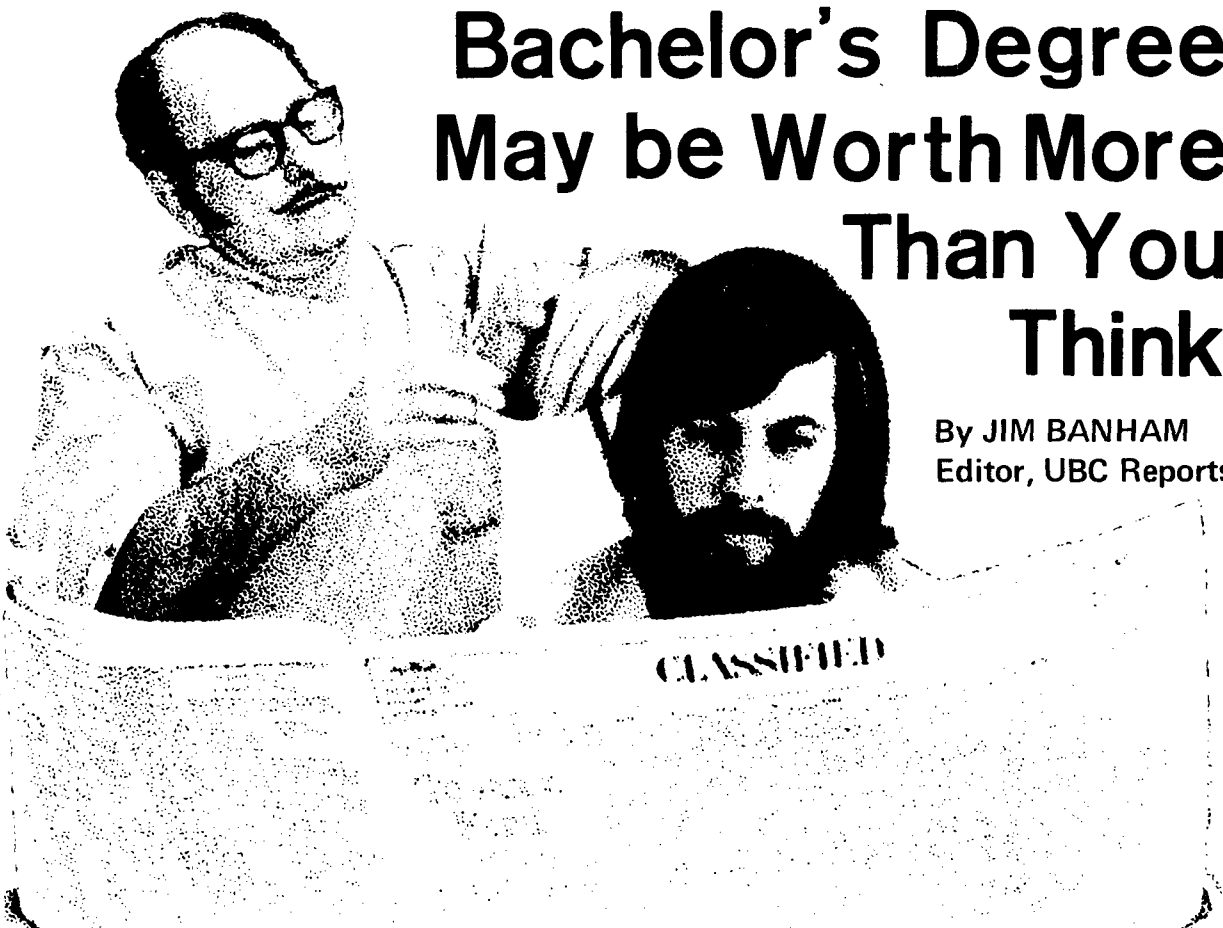


SUMMER SESSION SUPPLEMENT

SEE PAGES FIVE TO EIGHT

Bachelor's Degree May be Worth More Than You Think

By JIM BANHAM
Editor, UBC Reports



SO you think you're living in a disaster area as far as job prospects are concerned.

At UBC in 1973 that probably means you're graduating from the Faculties of Arts or Science with a bachelor's degree.

And what good is a bachelor's degree?

Well, it may be worth a good deal more than you think, according to a couple of UBC job placement experts and Mr. T.W. "Ted" Krell, a federal Manpower counsellor who claims he's had a great deal of success in helping bachelor's graduates sell themselves in the business world.

Despite the fact that Mr. Krell has never met his two UBC counterparts, all three agree that job-seeking students typically make a number of basic mistakes in searching for jobs.

First, many students haven't any clear idea of what they want to do and, as a result, are largely ignorant of the opportunities open to them.

This is the opinion of Mr. Krell and Mr. A.F. "Dick" Shirran, director of UBC's Office of Student Services, which includes a job placement office headed by Mr. J.C. "Cam" Craik.

In many instances, says Mr. Craik, the jobs that students want exist only in their own minds because of their lack of knowledge of the world outside the University.

Students also tend to think too narrowly and categorically about jobs, says Mr. Shirran, and fail to see possibilities in the full range of a company's operations.

"Students often don't realize there is a great deal of movement within an organization and the job one starts in will provide experience that can lead to more interesting positions," he says.

Mr. Krell, a UBC graduate with Arts and Law degrees, says students should avoid telling a prospective employer that they'll take anything. "The first thing a job hunter has to do is zero in on some aspect of a company's operations that is of interest to him or her," he says.

Which brings us to the second big mistake students make. They often apply indiscriminately for work without taking the trouble to find out anything about potential employers.

TO help overcome this the Office of Student Services has developed a voluminous set of files containing literature issued by companies that are interested in recruiting university graduates.

Almost every company spends large sums of

money on literature that describes its business function and the various departments which make up the company. The files containing all this material are in a public area in the Student Services Office and available at all times to job-seekers.

The UBC office has also begun to accumulate a series of cassette tapes that are designed to help students conduct interviews with prospective employers. One tape describes how to conduct an interview properly, while a second does just the opposite and includes just about every mistake that can be made by a job-seeker.

There is also plenty of literature available in the Student Services Office on such things as the preparation of resumes for submission to employers and other topics allied to job hunting.

Next year, Mr. Shirran says, his office hopes to organize a series of small seminars for students where job-hunting techniques can be discussed.

But let's get back to Mr. Krell for a moment. He's evolved a technique over the past two or three years that you might find useful in your search for a job.

He got interested in the student job problem two or three years ago when B.A.'s began to appear in his Manpower office and describe themselves as being "disabled" by their degree. "I laughed at this at first," he said, "but I soon came to realize that they were serious when they said that to mention a B.A. to an employer was a disability."

THE first thing you have to do, says Mr. Krell, is make a decision about the industry you want to enter. You can do this by visiting the Office of Student Services and looking through their files of company literature or you can find material in the public library system. If you're interested in a particular company and want more information, write or telephone the company direct. Chances are they have a booklet or pamphlet that will be sent to you.

In researching an industry or a company, try to get beyond the generalities. Find out the number and kinds of departments that make up the total company picture. If you're a science graduate, be on the lookout for such things as laboratories where testing and analyses are carried out. Many companies have them but you'd never know it from a cursory glance at the company's organization.

Your next task — the really important one — was developed by Mr. Krell after dozens of contacts with companies and unemployed students. It involves

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MR. A.F. "DICK" SHIRRAN

UPTURN IN

Continued from Page One

studies carried out in 1971. In Commerce the percentage of those who were seeking employment but were unemployed declined from 13.4 in 1971 to 5.1 in 1972, while in Forestry there was a decline from seven per cent in 1971 to zero in 1972.

Engineering graduates, on the other hand, experienced a significantly higher unemployment rate in 1972 than in 1971. The percentage of those who were unemployed but seeking employment increased from 6.4 in 1971 to 14.1 in 1972.

Graduates in both Arts and Science also experienced higher unemployment rates in 1972. The percentage of Arts graduates who were unemployed but seeking employment increased from 18.3 in 1971 to 21.4 in 1972, and the comparable figures for Science graduates are 19.2 in 1971 and 20.5 in 1972.

In summary, then, unemployment rates for UBC graduates who were available for work varied between zero in Forestry to 21.4 per cent in Arts during the months of September, October and November in 1972. The unemployment rate for the entire 20-24 age group in B.C. in the same period averaged around 11 per cent.

Mr. Shirran is reluctant to utilize his survey figures to make predictions about job prospects in 1973 but he does point to studies carried out by the United States College Placement Council which indicate that there is an upswing in the recruiting of engineers and commerce graduates.

On the other hand the College Placement Council predicts that U.S. requirements for Bachelor of Arts graduates in the humanities and social sciences will be down 23 per cent in 1973 from last year.

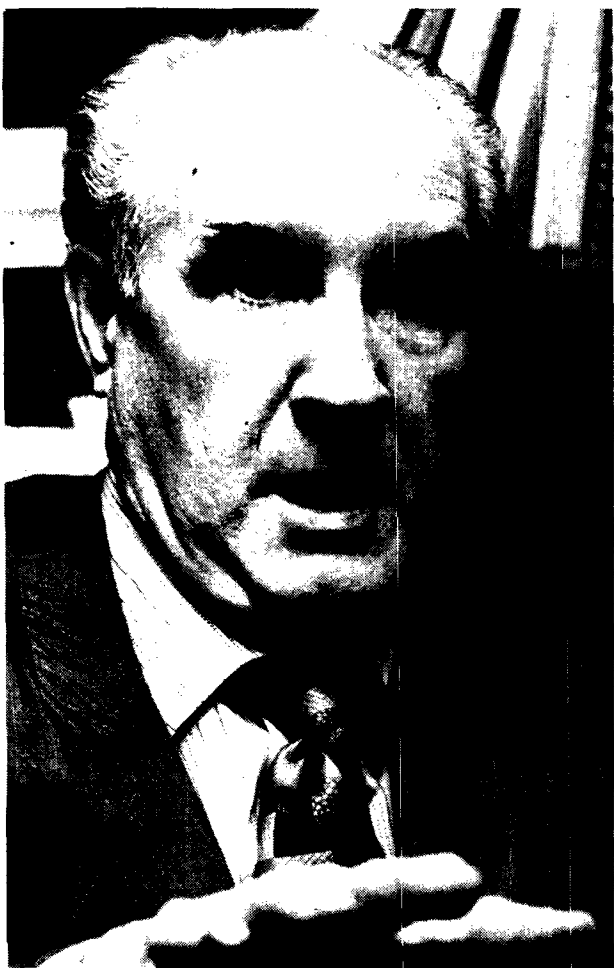
TRENDS NOTED

"It seems likely that these trends noted in the American placement situation will be reflected in the Canadian situation," Mr. Shirran said. One of the factors that complicates the employment picture is the trend, noted by Mr. Shirran in several studies he has carried out, for an increasing number of students to seek work after they obtain their first degree.

"This tendency," he says, "is probably not one of choice on the part of the students. Many would probably choose to prolong their education by continuing on to graduate or professional school, but entry into such schools is becoming more and more difficult.

"Graduate schools have not expanded to the same extent as undergraduate enrolment and the places simply aren't available."

This is confirmed in conversations with a number of UBC department heads. There are an increasing number of applications for graduate work but a fixed number of places. One Arts department head commented that this situation could be expected to improve the calibre of



MR. J.C. "CAM" CRAIK



MR. T.W. "TED" KRELL

Jobs for UBC students are one of the main concerns of the three people pictured at left. Mr. A.F. "Dick" Shirran heads UBC's Office of Student Services, which provides job and other forms of counselling for students, and also includes a Placement Office headed by Mr. J.C. "Cam" Craik. Mr. T.W. "Ted" Krell, a UBC graduate who now works for the federal government's Manpower department, has developed a procedure, described in the article beginning on the opposite page, to aid students in finding employment. Pictures by the IMC Photo Department.

U.S. MAY BE REFLECTED IN CANADA

students entering graduate studies since departments are able to choose only those students with the greatest potential.

So much for generalities. What follows, in capsule form, is a look at the 1972 employment experience of graduates of some UBC Faculties and the outlook for 1973, based on conversations with UBC deans, department heads, professors, officials in the Office of Student Services and employees of B.C. professional organizations.

FACULTY OF ARTS. Last May UBC graduated 809 students with the bachelor's degree and 80.1 per cent of them replied to the Office of Student Services' questionnaire on their post-graduation activities.

Of the 648 students who replied, nearly half of them — 46.1 per cent — continued in some form of formal schooling, including graduate school, professional training or technical school. Education was the predominant choice for those choosing professional training.

Those who said they were seeking work made up 47.7 per cent of the 648 respondents. The Student Services' report notes that this proportion is higher in 1972 than in previous years. In 1971, 40.2 per cent of Arts graduates sought work and the percentage figure for 1964 was 31.

For those departments with ten or more graduates available for work in 1972, the social sciences departments had the highest unemployment rate. The percentages of graduates available for employment but unemployed were: Sociology — 36.8 per cent; Anthropology — 30 per cent; Economics — 26.1 per cent; and Psychology — 22.2 per cent.

If the recent forecast by the U.S. College Placement Council is accurate, job prospects for Bachelor of Arts graduates will probably worsen in 1973. Department heads and professors who keep track of job opportunities for Arts graduates say they can see little indication that the trend of recent years will reverse itself this year.

Job opportunities for graduate students in the Faculty of Arts seems a little brighter. Psychologists with master's and Ph.D. degrees are much in demand and those who will graduate from UBC this year — ten to 12 — will have no trouble finding jobs.

Some departments say it's still too early to determine the extent of job opportunities, even for graduate students. Few, if any, graduate students in Mathematics have found jobs and much the same applies to the English department. Professors in both departments responsible for job placement say that opportunities will begin to show up in the next month or two when regional college and university budgets are finalized and teacher requirements become known.

Prof. Walter Young, the head of UBC's Department of Political Science, says his graduate students report a

tight job market for those seeking posts in regional colleges and universities.

Prof. Margaret Ormsby, head of UBC's History department, says more applications for graduate work have resulted from the job shortage. Her department accepts 20 to 25 students for graduate work each year and there are currently some 285 applications waiting to be processed. The three Ph.D.s who graduated from History last year have all found teaching posts, she says.

Dr. Michael Ames, the acting head of the Department of Anthropology and Sociology, says graduates of his department with a bachelor's degree aren't trained vocationally and have had to take jobs unrelated to their University training. He expects that in the future some will elect to enter the Faculty of Education as fifth-year transfer students, a possibility that has just opened up to them.

Graduates of professional schools within the Faculty of Arts should have little trouble finding jobs, providing they are mobile and prepared to take a post anywhere.

JOBS ASSURED

Dr. Melvin Lee, director of the School of Home Economics, says graduates in his School who go on to professional training in Education are assured of a job. This year, for the first time, a representative of the Alberta government's Department of Agriculture visited the School to recruit students. "I don't foresee any employment problems for our graduates," Prof. Lee says.

Prof. Roy Stokes, director of the School of Librarianship, says the job situation for graduates of his School has been tight in recent years but those who are mobile won't have any problems. The School of Social Work reports much the same situation for its graduates. There are positions available outside the urban areas, but many are not always the graduate's first choice. Ms. Marjorie Martin, executive director of the B.C. Association of Social Workers, says that by the fall of this year there should be increasing employment opportunities in B.C. as the result of expansion of services by the provincial government. She would like to see a study made of the social-work manpower needs in B.C., which she says would be useful for counselling prospective School of Social Work students.

FACULTY OF SCIENCE. Just over 85 per cent of the 457 Bachelor of Science graduates in 1972 replied to Student Services' questionnaire on their post-graduation activities. Of those who replied, 19.3 per cent went on to graduate studies, 18.5 per cent entered professional or technical training and 51.4 per cent said they were available for work.

Of the departments which had ten or more bachelor's graduates seeking employment, Mathematics had the highest percentage of unemployed — 31.4. Compared to 1971, unemployment rates among 1972 graduates in

Computer Science, Mathematics and Zoology rose, while unemployment for Geophysics and Geology graduates declined.

There is little cause to be optimistic about improved job opportunities for 1973 Bachelor of Science graduates. Few Science departments keep track of their first-degree graduates and those that do see little chance of a reversal of last year's experience.

Many departments, however, note an upswing in opportunities for graduate students, particularly those who have specialized in environmental studies.

Prof. Peter Larkin, head of the Zoology department, says that both the federal and provincial governments are hiring in the fish and game and northern studies areas. There is a shortage of graduates at the master's level, he adds, and many master's students are postponing the writing of their theses to take jobs instead. "There are good prospects ahead for the next four or five years," he says.

Prof. Crawford "Buzz" Holling, director of the Institute of Animal Resource Ecology, says none of his ten to 12 graduate students will be unemployed for long. They'll be snapped up by universities, governments and consulting firms.

Prof. John Chapman, head of the Geography department, says he is surprised by the number of circulars received by his department advertising university teaching opportunities. He doesn't expect any of his department's graduate students will lack for work.

FACULTY OF PHARMACEUTICAL SCIENCES. Last year 44 of the 46 Pharmacy graduates replied to the questionnaire. Only one graduate was found to be unemployed and 1973 prospects are expected to be equally good, as long as the graduate is mobile. There are plenty of jobs waiting in the north and in rural areas, according to Mr. Peter Bell, executive co-ordinator for the B.C. Professional Pharmacists Society.

FACULTY OF LAW. Just over 91 per cent of the 1972 graduating class in Law returned the questionnaire sent to them. Of the 163 respondents, 155 sought articles with law firms and obtained them. Obtaining articles in 1973 may be a bit more difficult, according to UBC's dean of Law, Prof. A.J. McClean. This year's graduates will "have to hustle a little more" than graduates of previous years.

FACULTY OF FORESTRY. Of the 48 members of the 1973 Forestry graduating class, 43 have jobs and the rest aren't looking, according to Mr. Robert C. Henderson, a lecturer in the Faculty who looks after job placement. About 35 per cent of this year's class will be employed by government and the rest by industry.

The unemployment rate for the 1972 graduating class in Forestry was zero, an improvement from 1971, when the unemployment rate was 6.1 per cent.

FACULTY OF APPLIED SCIENCE. Taken as a

*Please turn to Page Ten
See JOBS*

IF ALL you know is what you read in the papers, then you would believe that the way health care is provided in Canada is a terrible mess. You can't pick up a paper, it seems, without reading about difficulties in the health field — complaints by patients, staff threatening to strike, conflicting mixtures of medicine and morality, recommendations from yet another commission, politicians warning that changes must be made.

The crisis in health care has been the talk of people in health circles for about a decade. Recently, concern has spilled over into the general public.

In Ontario a study financed by the Ontario Medical Association to find out what the public thinks of health care has drawn a surprisingly large number of briefs and large and sometimes emotional crowds in the hinterlands of the province.

And in B.C. Dr. Richard Foulkes, head of a special commission set up by provincial Health Minister Dennis Cocke, has received more than 2,200 letters and briefs since asking at the beginning of this year for public submissions on B.C.'s health system.

Attempts to anticipate the needs and changes of health care in the future by three men in the University of B.C.'s Health Sciences Centre were dealt with in the Feb. 22 edition of *UBC Reports*. This is the second and last article on UBC's contribution to some kind of solution.

A basic economic reason why the wind of change is beginning to blow through our health system is that a large amount of health care is done in hospitals. Canada has gone on a hospital binge.

Hospitals are labor intensive. A lot of people work in them. Wages paid to hospital employees in the past have been depressed. But hospital workers of all types have been demanding higher wages, and operating costs for this and other reasons have rocketed. The rate of increase in costs in acute care hospitals in recent years has been about 14 per cent a year. Hospitals, especially acute care hospitals, claim the largest single cost of our health system. Their costs are also increasing the fastest.

Many of the people who are treated in hospitals shouldn't be there. They can walk, dress themselves, wash themselves. Yet as soon as they occupy a hospital bed they are waited on hand and foot at the tax-payer's expense. Many are sent there by doctors for a series of tests. Often hospitals are the only place where facilities for carrying out these tests exist.

This emphasis on hospital use has led to a stream of recommendations from commissions, study groups, task forces and other investigating bodies. A clear pattern of suggestions, many of them anticipated by health specialists at UBC, has emerged.

A major theme is the creation of a health facility that is half-way between a hospital and a doctor's office, the two points of intense contact between patients and health care. This middle ground is the community health centre, a hospital without beds.

Last fall the Report of the Community Health Centre Project recommended that community health centres be built across Canada. The study, headed by Dr. John Hastings of the University of Toronto, was commissioned by the conference of federal and provincial health ministers. One of the research co-ordinators for the project was Dr. Anne Crichton, of UBC's Department of Health Care and Epidemiology in the Faculty of Medicine.

CAUSES STIR

Perhaps the most important recommendation of the report is for "the development by the provinces, in mutual agreement with public and professional groups, of a significant number of community health centres ... as non-profit corporate bodies in a fully-integrated health services system."

The report caused a stir in B.C. Though many other studies had come up with similar suggestions, the Hastings Report, perhaps because of coincidental timing, was the one that finally removed the last doubts from the minds of health professionals that change would soon be upon them.

Shortly after the report was released UBC's Health Sciences Centre sponsored a public meeting to discuss the recommendations.

Representatives of nursing, occupational therapy, dentistry, physiotherapy, pharmacy, hospital administration, social work, dietetics and medicine made

Experts in health circles have been talking about the crisis in health care for almost a decade. One of the solutions proposed is community health centres, half-way houses between a hospital ward and the physician's office. UBC has already established mini-community health centres, where health professionals work as a team to create . . .

HOSPITALS WITHOUT WALLS

By PETER THOMPSON
UBC Reports Staff Writer

their case at the meeting. Their views mixed in the neutral surroundings of the Health Sciences Centre and reacted under the stimulus of Dr. Hastings, who fielded questions and parried attacks for hours. Among the 700 people attending was the man responsible for working out a new health system for B.C., Health Minister Dennis Cocke, who has already announced he is in favor of community health centres.

It's been said by some that one of the main hopes of community health centres is that they will reduce health costs. Health manpower and economic specialists at UBC are sceptical about this claim. They point out that money will be needed to build the new centres and many new non-medical services will be included in them. But even in the long run savings will only come about if the hospital beds they replace are no longer used, some observers say. Even then, they say, savings will be minimal or non-existent and at best the new centres will only hold down the rate of increase of the costs of health care.

What some UBC health specialists foresee coming from community health centres is a better quality of "ambulatory" or primary care — health services now rendered in the patient's home or in a doctor's office. Community health centres will bring together many individual health professionals so that they can share common facilities.

For example, a physician in "solo" or individual practice can't economically justify having a social worker, nutritionist, physiotherapist or many other health professionals in his or her office, though a number of solo physicians do rely on other health professionals in agencies such as the Children's Aid Society and the Victorian Order of Nurses. But a number of physicians working in a community health centre can create their own health team.

Bringing in other health professionals makes sense because many patients have health problems that

aren't medical or have only a small medical component. Some of these problems are economic, psychological or social and are better handled by a social worker, nurse or nutritionist or some combination of health professionals that may or may not include a physician.

Apart from hoping to economize by grouping community health professionals into larger and more efficient units, community health centres also want to head off health problems before they have a chance to develop. This is a shift of emphasis away from acute-care hospitals. Instead, health care will be taken into the community, closer to the public.

This is already being done. Modern drugs have stopped a great deal of illness in its first stage of development. Drugs that have become available in the last decade now allow family physicians to check many psychological disorders that in the past would have led patients to a hospital bed. The same is true of much physical illness. Antibiotics make it possible for many infections to be cleared up before they reach the acute stage that requires hospitalization. A rarity on a hospital ward these days, for example, is a case of mastoiditis or inflammation of the mastoids. Preventive health care could be much more effective except that governments have avoided the opportunity. If governments would fluoridate water supplies and make a serious attempt to cut down smoking in Canada, for example, there would be a dramatic reduction in pain, illness and financial loss in the community.

UBC's Faculty of Medicine and a few others in Canada have already set up community health centres. UBC has three mini-centres in operation. Health professionals in UBC's health schools provide care to the public through the centres. The real job of the centres, though, is to train student health professionals and do research into the most effective means of providing health care. The University pays only for the teaching end of the centres' activities.

TRAIN STUDENTS

One reason for opening the centres is removed from the health-team idea and is more internal to the Faculty of Medicine. UBC's three mini-community health centres were planned and two opened while Dr. John F. McCreary was dean of the Faculty of Medicine. Dr. McCreary, now Co-ordinator of Health Sciences at UBC, said that it was said that medical students weren't getting a representative view of medical practice in their practical training with patients in hospitals. In fact, concentrating practical or clinical training in hospitals was probably bad, Dr. McCreary said.

"For one thing, many of the medical problems seen in a hospital setting are relatively rarely seen in a physician's office. Appendectomies or repair of ruptures are routine surgical procedures done in hospitals. But it might be a year or two or three after graduating from medical school that a doctor sees such cases in his own practice. Some family practitioners say they were taught to deal with acutely-ill patients lying horizontally on a hospital bed, whereas all the patients they see in their practice are vertical. Medical schools reflect a fascination with rare diseases instead of dealing with bread-and-butter medicine, some say.

"Apart from training students in problems that they rarely encounter as family practitioners, concentrated clinical training in hospitals often doesn't prepare students for what they will have to deal with on a day-to-day basis as practicing physicians," Dr. McCreary said. "Some family practitioners say medical students aren't being prepared to cope with a teenager who complains about his parents, a woman weeping over the doctor's desk, a man who says he feels exhausted and impotent, a girl who's depressed, or a boy who's dying.

"Another disadvantage to training medical students exclusively in a hospital setting is that most of their teachers are specialists. The clinical training has been described as the most critical period in a medical student's life. The ideas, ethics, detachment, self-criticism, and compassion that a physician should have are absorbed primarily during this period. Clinical teachers must provide students with the inspiration that hopefully will last them the rest of their lives.

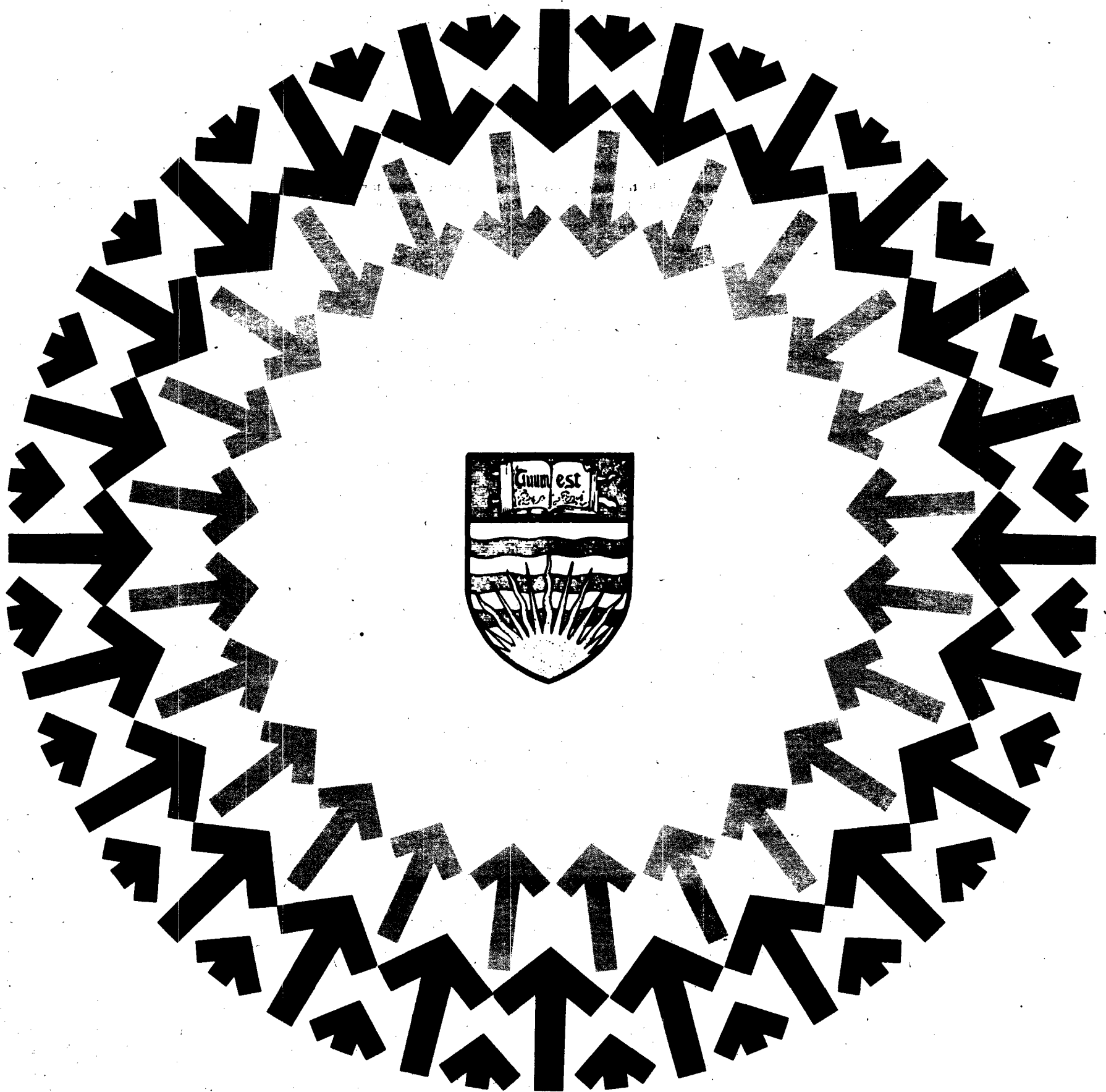
"The ratio of specialists to family practitioners graduating from Canadian medical schools since the

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UBC
REPORTS

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UBC SUMMER SESSION 1973



Calendar Available

Deadline for UBC Summer Session '73 registration is May 1. Registrations received after that date will be assessed a late registration fee of \$20. No registration will be accepted after June 1.

Requirements for admission to the University are listed in the University *Calendar*. (To obtain a *Calendar* see application form at the foot of this column.)

The maximum credit for Summer Session work in any one calendar year is six units. Total fee for six units, including the Summer Session fee, is \$203, or \$103 for three units.

Room and board is available for Summer Session students in the Place Vanier Residence on campus. Rate sheets will be available on request after May 1 from the Office of the Director of Residences in UBC's General Services Administration Building.

Calendar Corrections

The following corrections to the Summer Session Calendar should be noted:

Page 1 — Innovations this Summer — No. 2 should have read "Evening Courses this Summer Session, See Page Six."

Page 24 — Education 308. Time should be 10:25 a.m.—12:20 p.m., NOT 8:15 a.m.—10:10 a.m. as indicated.

Page 27 — Education 478 — Prerequisite should read "As of September, 1973, the prerequisite for Education 478 will be one of Education 489, English 309, Linguistics 100, 200, 205, 300."

Page 36 — Mathematics 221. Pre-reading recommended: D.C. Murdoch, *Linear Algebra*, Wiley and Sons, Inc.

Page 41 — Registration procedure. Second line of item should have had the page number 44 inserted.

Note re Education 301 (1½) — Introduction to Education Psychology, and Education 302 (1½) — Introduction to Educational Evaluation. Please see timetable on Page Six. These courses are not listed under course descriptions.

The following two courses have been added since the Summer Session *Calendar* went to press:

Education 494 (1½) — Communications Media Programs in Schools — Motion Picture Film and Television — Organizing, developing and teaching of motion picture study programs in educational institutions. The impact of film and television on the viewer. Limited to 20 students. Instructor: Mr. James Mulholland. Time: Ten hours lectures a week, Monday through Thursday — 7 — 9:30 p.m., July 3 — July 25.

Education 496 (1½) — Motion Picture Production in Education. Planning and production of educational motion picture resources for use in achieving specific learning objectives. This will include a study of motion picture design, pictorial continuity in relation to learning and production planning for educational purposes. Limited to 20 students. Prerequisite: Education 414. Instructor: Mr. James Mulholland. Time: Ten hours lectures a week, Monday through Thursday — 7 — 9:30 a.m., July 26 — Aug. 17.



SEND ME OFF TODAY

PLEASE SEND ME A CALENDAR
FOR SUMMER SESSION '73

The Registrar,
University of B.C.
Vancouver 8, B.C.

Name (please print)

Address



DR. NORMAN WATT

IMC Photo Department

DIRECTOR'S

I am pleased to have the opportunity, through this Summer Session '73 Supplement, to let you know about the courses and events planned for July and August at UBC's Point Grey campus. With this kind of advance information, we hope that many of you will plan to use the resources of the University during the summer.

In co-operation with the participating Faculties and departments, we have planned a variety of credit courses, some of which are being offered for the first time during a Summer Session. In addition to our own professors, we are very fortunate to have a number of distinguished visiting professors teaching on our campus this summer.

For the first time Summer Session will offer credit courses in the evening. We feel there is a need to extend our course schedule so that those people who must work during the day have an opportunity to attend. Also, for

Session Goals

The following is a list of goals of Summer Session '73:

- To provide a learning environment for new and continuing students commensurate with their academic, intellectual, professional, and/or cultural needs.
- To achieve optimum utilization of campus facilities and resources throughout the year.
- To lend both direct and indirect support to the University's year-round program of graduate education and research.
- To provide an opportunity for school personnel and other professional and occupational groups that require periodic updating of knowledge or qualifications.
- To encourage departments to experiment with new

VISITING UBC PROFESSORS

The following is a list of some of the visiting professors at Summer Session 1973:

Dr. William Parker, who will be teaching Chemistry 230, is chairman of the Department of Chemistry at the University of Stirling, Scotland. He is a fellow of the Royal Institute of Chemistry.

Dr. N. Eugene Savin, Economics 301 and 302, is from Northwestern University, in Chicago, but is on a two-year leave of absence and is actually at the University of Manchester, in England, at present. This is the third summer he has taught at UBC. He will be taking up a one-year appointment here this fall.

Dr. Eli Mandel, English 545, is a professor in the Division of Humanities at York University, Toronto.

Dr. Ian Hilton, German 310/406, is from the University College of North Wales, Bangor, Wales. He lectured at UBC during Summer Session, 1971, when he was an associate professor at the University of Calgary.

Dr. H. Blair Neatby, History 426, was formerly with the UBC Department of History. He is now professor and chairman of the Department of History at Carleton University, Ottawa.

Dr. Donald H. Blocher, Education 426, is from the University of Minnesota. He has published two books, as well as several parts of books, research publications, articles, etc. He has been a guest lecturer at several universities, a keynote speaker at numerous meetings in the United States, United Kingdom and Canada and has presented papers and acted as consultant to the Veterans Administration Counselling Psychology Training Program.

Dr. Jerzy J. Wiatr, Political Science 300, is a professor at the Institute of Sociology at Warsaw University. He is

SPORTS SCHOOLS

A sports program encompassing a sports camp for boys and girls, a residential and day hockey school, a soccer coaching school and a "Skate UBC" Summer School, is being offered by UBC's School of Physical Education and Recreation during July and August.

Enquiries about enrolment in any of the above activities should be directed to: School of Physical Education, University of B.C., Vancouver 8. Telephone: 228-3177 or 228-3197.

also vice-president of the Polish Association of Political Science. He has published extensively, including books and articles in Western European languages.

Dr. Robert S. Albert, Psychology 301, is from Pitzer College in Claremont, California. He has served as a research associate at Avistock Institute in London and at the Harvard Medical College. He has published many papers as well as a book and a monograph.

Dr. Robert Sinclair, Geography 498, is from Wayne State University, in Michigan. His fields of major interest are the geography of Europe, political geography and urban geography. Twice he has been awarded a Fulbright

Music, Theatre

The summer music scene on campus hits a high note with the presence of the National Youth Orchestra, which will hold its 1973 Summer Training Session at UBC — for the first time ever in the West.

"The presence of these outstanding young musicians from across Canada on our campus will give a tremendous boost to the summer musical activities which, even without the Youth Orchestra, are always one of the major highlights of the Summer Session," says Dr. Norman Watt, Summer Session Director.

"Without a doubt this will be the most exciting Summer Session, in terms of musical activities, ever held on campus."

The NYO will be heard in concert on the campus and downtown, with dates yet to be announced. Some rehearsals will also be open to Summer Session students.

In addition to the NYO performances, the very popular Summer Sounds program of noon-hour and evening concerts will be held again this year. Noon-hour concerts will feature instrumental soloists, duets, trios, string quartets, jazz groups, brass and woodwind ensembles, opera, electronic music ensembles and rock groups.

The UBC Music department, in conjunction with the Summer Session Association, is presenting a series of six Thursday evening recitals and concerts, with the first three featuring members of the department and the last three by members of the National Youth Orchestra faculty.

MESSAGE

the first time, graduating high school students may now make application to attend Summer Session.

Summer Session need not be all work and no play. To this end, the Summer Session Association and this office have planned a number of cultural and recreational activities, most of which are open to the public as well as to our summer students. The details of these activities appear in this supplement.

We feel that there will be lots going on at UBC this summer. I hope you enjoy reading the supplement and whether you attend a musical or theatrical performance, take a swim or take a course, I trust you will all take the opportunity of getting to the POINT this summer.


Director, UBC Summer Session

Is Described

and innovative ways of presenting their courses and programs.

- To provide opportunities for part-time students and qualified high school students to begin post-secondary education, possibly in an exploratory way.
- To add variety and expertise to academic, professional and cultural offerings by the inclusion of distinguished visiting faculty.
- To encourage and support those cultural and recreational programs conducted for the benefit and enjoyment of students enrolled in the Summer Session.
- To provide students with an opportunity to complete their degree requirements more quickly.
- To encourage the use of facilities, resources, and faculty by students of all ages by offering clinics, workshops, and camps.

COURSES LISTED

Research Grant — in 1963-64 for Austria and in 1971-72 for Germany.

Dr. Wayne Suttles, Anthropology 304, is returning to UBC this summer after an absence of 10 years. He has done considerable work with the Northwest Coast Indians and at present is working on a grammar and lexicon of the Musqueam dialect of Halkomelem and an analysis of the ethnographic content of a body of Musqueam texts.

Dr. Kernial S. Sandhu, Asian Studies 206, is a member of the Geography Department at UBC at present on two years' leave of absence as director of the Institute of Southeast Asian Studies in Singapore.

Program Highlights

UBC will have its own summer stock company this year at Summer Session '73. The company will be made up of students from the Theatre department who are seeking practical theatre experience following the Winter Session.

Known as Stage '73, the company gives students an opportunity to work in many areas of theatre ranging from production and acting to design and technical work.

Although final choices of productions have yet to be made, this summer's program will consist of a musical, a serious drama and a comedy. Performance dates have been set for July 4-14, July 18-28 and Aug. 1-11.

FILM PROGRAM

A variety of films designed to entertain and educate will be featured during Summer Screen '73 at UBC's Summer Session '73.

The film festival starts July 9 and runs to Aug. 10. There will be two showings of the same film each day, at 3:30 p.m. and 7:30 p.m., in the Hebb Lecture Theatre on the East Mall.

The program is being developed from the suggestions of faculty members who will be involved in the Summer Session. The majority of the films are being selected from the National Film Board catalogue.

Mr. Sandy McGeachan is producer-director of Summer Screen '73.

Evening Courses Offered

Evening courses for credit are being offered this year for the first time ever at a UBC Summer Session. Other innovations at Summer Session '73 include admission of

SSA ACTIVE

Most of the campus cultural and social events during UBC's Summer Session '73 are arranged by the Summer Session Association, which serves as the students' council for summer students.

The Association helps arrange noon-hour and evening concerts and social and recreational activities around the campus.

A Summer Session Loan Fund, established by the Summer Session Association in 1947, provides loans of up to \$200 for Summer Session students, repayable by March 1 of the following year.

This year's Summer Session Association executive are: President — Mr. Fred Calhoun; Past President — Mr. Jim Hegan; Vice-president/Secretary — Mr. Theo Meijer; Treasurer — Mr. Jim Sullivan; Directors — Mrs. Fran Carter, Miss Trish Hadfield. Producer-director of Summer Sounds '73, a program of musical events, is Mr. Michael Grice.

The Association has arranged for the use of Empire Pool and other recreational facilities on campus during Summer Session.

Ten free swims in the pool will be given all students, athletic equipment will be available from the School of Physical Education and Recreation from 8:30 a.m. to 4:30 p.m., and the War Memorial Gymnasium will be reserved for recreation activity for summer students from 1 p.m. to 5 p.m. Monday through Friday.

LANGUAGES OFFERED

Intensive ten-week courses in basic Chinese and Japanese are being offered for the first time during UBC Summer Session '73.

The course in Japanese aims to teach basic grammatical structures and vocabulary of modern colloquial Japanese through lectures, written exercises and both oral and aural drills.

The instruction will be divided into lectures and drills totalling four hours daily. During the first week, while emphasizing the oral aspect of the language, written forms will be introduced.

At the end of the session the students should have mastered the basic grammatical structure of Japanese and have a good command of a number of written characters.

In the Chinese course the student learns to speak Mandarin Chinese, to read written texts and to write simple modern Chinese. Chinese characters are learned at an average rate of 15 per day for a total of 750 by the end of the course.

There will be five hours of supervised instruction each day, including lecture drill and language laboratory sessions. Successful completion of this course will qualify students for further study in Chinese 200, 201 and 300.

SPECIAL INTEREST

A "package" of courses of special interest to teachers of native Indian children is being offered at UBC's Summer Session 1973.

Students may take any two of a grouping of four courses — Anthropology 304 — Indians of the Northwest Coast; Education 479 — Cross-Cultural Education (Native Indians); Education 478 — Teaching English as a Second Language; and Education 473 — Developmental Reading.

Another "package" of special interest to teachers of home economics includes Home Economics 201 — Foods; Home Economics 220 — Design Fundamentals; Home Economics 312 — Clothing Design; Home Economics 360 — Decision-making and Management in the Family; and Home Economics 362 — Consumer Problems.

Seven courses covering Canadian topics are being offered. They are: English 446 — Canadian Literature; English 545 — Studies in Canadian Literature; History 303 — History of the Canadian West; History 329 — The Social Development of Canada; History 426 — Canada After 1867; Political Science 200 — The Government of Canada; Anthropology 420 — The Archaeology of British Columbia.

students who have just graduated from high school, and credit for University of Victoria courses.

The decision to offer evening courses for persons who have full-time jobs is an example of the Summer Session responding to new educational trends, says Summer Session Director Dr. Norman Watt.

"Though it has generally been accepted over the years that evening classes would not be popular during the summer months, we have had many enquiries from people who wanted to take evening courses. So we decided to schedule a few this year."

Dr. Watt said a number of universities across Canada have included evening courses in their summer programs and enrolment has increased considerably. "Those without evening programs have experienced a decline in enrolment, so the value of the evening courses speaks for itself," he adds.

Evening classes will be offered in eight different subjects with classes running from 7 p.m. to 9:30 p.m. Monday through Thursday.

The following subjects will be offered:

Mathematics 100 — Calculus; Mathematics 121 — Introduction to Linear Algebra; Psychology 301 — Developmental Psychology; Psychology 308 — Social Psychology; Music 135, 235, 335, 435 — Opera Repertoire; Economics 470 — The Economics of Natural Resources; Mathematics 311 — Elementary Number Theory and Algebraic Concepts; Education 407 — Introduction to the Study of Exceptional Children; Education 494 — Communications Media Programs in School; Education 496 — Motion Picture Production in Education; Anthropology 304 — Indians of the Northwest Coast; Asian Studies 206 — Introduction to Southeast Asia.

Dr. Watt said the Summer Session office has also been receiving increasing numbers of enquiries from graduating high school students who are interested in taking courses because of a lack of summer jobs.

"Their reasoning is that not only can they get the jump on the University year by taking some courses but they can also familiarize themselves with the campus in preparation for full-time enrolment in September."

Students will be permitted to register on the recommendation of their school principal and they will be counselled to take only one course.

University of Victoria students will be able to take credit courses at UBC and vice versa under a scheme worked out for the first time this year. Astronomy 120, Classical Studies 300 and 370, and Theatre 382 will be offered at the University of Victoria, while University of Victoria students will be able to take 50 courses at UBC for equivalent credit.

"One of the reasons for the disparity is the larger number of courses offered at UBC's Summer Session and also the fact that UBC has a larger number of visiting professors who will be offering courses of interest to University of Victoria students," Dr. Watt says.

"We are delighted to have been able to co-operate with Victoria," adds Dr. Watt. "It is mutually beneficial because it also enables us to eliminate some otherwise low-enrolment courses."

NEW COURSES

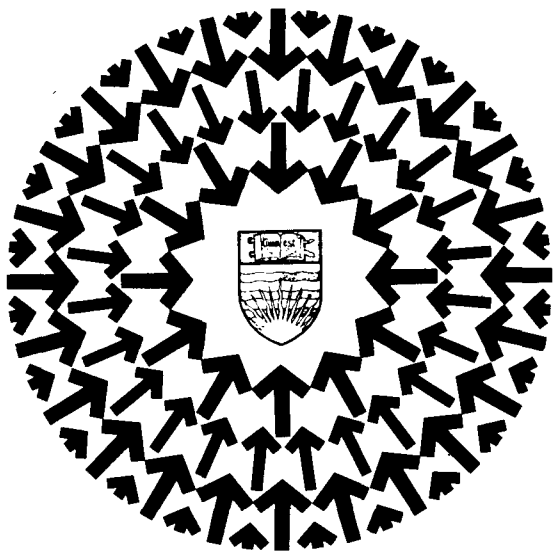
Twenty-four new courses, ranging from Anthropology 304 — Indians of the Northwest Coast to Education 565 — Earth and Space Science — are being offered at UBC's Summer Session '73.

The majority of the new courses are being offered in Education. "We make an attempt to keep up with the rapid changes in education by providing courses that are relevant to the teacher in the classroom," says Summer Session Director Dr. Norman Watt, who is also an associate professor in the Faculty of Education.

Education 487, for example, is an examination of recent developments in elementary education with emphasis on the study of open-area schools, non-grading, team-teaching, techniques of individualized instruction and use of learning-resource centres.

Education 565 is designed primarily for teachers who wish to teach earth and space science in secondary schools. Other new education courses include Education 489 — Applied Linguistics for Teachers and Education 565 — Special Course in Foundations.

Other new courses are being offered in Anthropology, Computer Science, Economics, Fine Arts, Geography, History, Italian, Mathematics, Psychology, Religious Studies and Sociology.



SUMMER COURSES LISTED

Summer Session students will be able to choose from the more than 200 courses listed below. Most courses are valued at three units. Unit values larger or smaller than three are noted in brackets after course numbers.

ANTHROPOLOGY

- 200 Introduction to Social Organization
- 304 Indians of Northwest Coast
- 420 Archaeology of British Columbia

ASIAN STUDIES

- 206 Introduction to Southeast Asia
- 335 Japanese Literature in Translation
- Chinese 180 (6) Beginning Chinese Workshop
- Japanese 180 (6) Beginning Japanese Workshop

BIOLOGY

- 101 Principles of Biology
- 200 (1½) Cell Biology I: Structural Basis
- 201 (1½) Cell Biology II: Chemical Basis
- 323 General Ecology
- 335 Principles of Genetics

BOTANY

- 209 (1½) Non-Vascular Plants
- 210 (1½) Vascular Plants

CHEMISTRY

- 103 General Chemistry
- 205 Physical-Inorganic and Analytical Chemistry
- 230 Organic Chemistry

CLASSICAL STUDIES

- 331 Ancient History
- 310 Greek and Roman Literature

COMMERCE

- 151 (1½) Fundamentals of Accounting
- 190 (1½) Fundamentals of Business
- 291 (1½) Introduction to Computers in Business Administration
- 317 (1½) Pre-MBA Introduction to Data Processing
- 352 Pre-MBA Managerial Accounting
- 375 Personal and Business Finance
- 591 (1½) Seminar in Business Policy
- 592 (1½) Seminar in Business Administration

COMPUTER SCIENCE

- 210 Algorithms and Programming
- 310 Advanced Programming and Data Processing

CREATIVE WRITING

- 301 Writing Techniques

ECONOMICS

- 200 Principles of Economics
- 301 (1½) Intermediate Microeconomic Analysis
- 302 (1½) Intermediate Macroeconomic Analysis
- 470 The Economics of Natural Resources
- 590 Special Advanced Course

ENGLISH

- 100 (2 sections) Literature and Composition
- 200 (4 sections) Literature and Composition
- 300 Seminar for English Majors
- 303 (6 sections) English Composition
- 311 (5 sections) Children's Literature
- 321 Approaches to Poetry
- 365 (2 sections) Shakespeare
- 440 Canadian Literature
- 454 American Fiction
- 545 Studies in Canadian Literature

FINE ARTS

- 125 History of Western Art
- 181 Design Fundamentals
- 335 Renaissance and Mannerist Art
- 339 19th and 20th Century Art

FRENCH

- 110 (2 sections) First-Year French
- 120 Contemporary French: Language and Literature
- 202 Studies in French Language and Style I
- 302 Studies in French Language and Style II
- 306 French Phonetics
- 412 The Nineteenth-Century Novel

GEOGRAPHY

- 101 Introduction to Physical Geography
- 200 (1½) Human Geography
- 337 (1½) Introduction to Political Geography
- 350 (1½) Introduction to Urban Geography
- 371 (1½) Research Techniques in Geography
- 396 (1½) Geography of Monsoon Asia
- 498 Geography of Europe

GEOLOGY

- 105 Physical and Historical Geography

GERMAN

- 100 First-Year German
- 200 Second-Year German
- 310 German Literature 1800-1900
- 406 Studies in Nineteenth-Century Drama
- 514 Nineteenth-Century Realism

HISTORY

- 303 History of the Canadian West
- 305 Expansion of Europe in the Atlantic Area
- 317 Medieval English Institutions
- 422 Modern Japanese History Since 1868
- 426 Canada After 1867
- 435 Communist Movements in Eastern Europe Since 1900

HOME ECONOMICS

- 201 Foods
- 220 (1½) Design Fundamentals
- 312 (1½) Clothing Design
- 360 (1½) Decision-Making and Management in the Family
- 362 (1½) Consumer Problems

ITALIAN

- 100 First-Year Italian

LATIN

- 100 First-Year Latin

LINGUISTICS

- 200 General Linguistics: Part I

MATHEMATICS

- 100 (2) (2 sections) Calculus I
- 121 (1) (2 sections) Introduction to Linear Algebra
- 221 (2) Linear Transformations in Euclidean Space
- 222 (1) Elementary Algebra
- 305 Statistics
- 310 Geometry
- 311 Elementary Number Theory and Algebraic Concepts
- 413 Introduction to Mathematical Logic

MICROBIOLOGY

- 200 Introductory Microbiology

MUSIC

- 321 Music Appreciation, Twentieth-Century
- 326 Music Appreciation
- 135/235/335/435/ (1) Opera Repertoire I,II,III,IV

PHILOSOPHY

- 100 Introduction to Philosophy
- 301 Ethics

PHYSICAL EDUCATION

- 213 (1) Field Hockey
- 214 (1) Rugby
- 215 (1) Soccer, Speedball, Speed-a-way (women)
- 219 (1) Volleyball
- 226 (1) Tennis
- 230 (1) Swimming I
- 243 (1) Square Dance
- 251 (1) Track and Field II
- 301 (1) Educational Gymnastics
- 361 (1½) Prevention and Care of Injuries
- 362 (1½) Adapted Physical Education
- 365 (1½) Training and Conditioning for Competition
- 366 (1½) Physical Activities for Young Children
- 381 (1½) Sociological Aspects of Sport

PHYSICS

- 110 Mechanics, Electricity and Atomic Structure

POLITICAL SCIENCE

- 200 (1½) The Government of Canada
- 201 (1½) Foreign Governments
- 300 Development of Political Theory: Basic Concepts and Issues

PSYCHOLOGY

- 200 Experimental Psychology
- 301 Developmental Psychology
- 308 Social Psychology
- 311 Individual Differences
- 316 Methods of Research
- 546 Seminar in Psychological Problems

RELIGIOUS STUDIES

- 202 Introduction to the Study of Western Religious Traditions
- 341 Islamic Art and Architecture

SOCIOLOGY

- 361 Social Stratification (formerly Sociology 315)

SPANISH

- 100 First-Year Spanish
- 200 Second-Year Spanish

THEATRE

- 200 Theatre Practice (formerly Theatre 300)
- 320 History of Modern Theatre

EDUCATION COURSES

ART EDUCATION

- 100 Introduction to Plastics and Graphic Arts
- 201 Drawing
- 302 Painting
- 401/402 Painting II and III
- 403/413 Ceramics and Modelling II and III

MUSIC EDUCATION

- 101 Elementary Theory

GENERAL SCIENCE EDUCATION

- 309 (3 sections) General Science for Elementary School Teachers

EDUCATION

- 301 (1½) Introduction to Education Psychology
- 302 (1½) Introduction to Educational Evaluation
- 307 Music Education
- 308 Physical Education
- 331 (2 sections) Human Development
- 332 (2 sections) Psychology of Adolescence
- 333 Curriculum and Instruction for Young Children
- 336 Modern Theories of Education for Young Children
- 370 (1½) Mathematics for Elementary Teachers
- 371 (1½) Methods of Teaching Elementary School Mathematics
- 390 The Library in the School
- 400 (2 sections) Philosophy of Education
- 403 (1½) Mental Retardation
- 404 (1½) Art (with Education 425)
- (1½) English
- (1½) French
- (1½) Home Economics
- (2 sections) Social Studies
- 405 Curriculum and Instruction in Primary Grades
- 407 (3 sections) Introduction to the Study of Exceptional Children
- 409 General Science
- 412 Introduction to Adult Education
- 414 (2 sections) Communications Media and Technology in Learning
- 416 Speech Education
- 417 (1½) Educating the Slow Learner and Emotionally Handicapped
- 424 Language Development in the Exceptional Child
- 425 Curriculum and Instruction in Art II (with Education 404)
- 426 (1½) Personnel Services in the Schools
- 430 (3 sections) History of Education
- 431 (1½) Primary Learning Disabilities
- 436 (1½) Behavior Disorders in Children
- 437 (1½) Teaching Maladjusted Children
- 440 (1½) Special Study in Home Economics
- 460 An Introduction to Educational Administration
- 470 (3 sections) Educational Sociology
- 472/474 Guiding Reading Programs for Junior and Senior Secondary Schools
- 473 (3 sections) Developmental Reading in the Elementary Grades
- 476 Remedial Reading
- 478 Teaching English as a Second Language
- 479 Cross-Cultural Education (Native Indians)
- 481 (1½) Introduction to Research in Education
- 482 (1½) Introduction to Statistics for Research in Education
- 483 (1½) Statistics in Education
- 487 Recent Developments in Elementary Education
- 488 (1½) Problems in the Teaching of Elementary School Mathematics
- 489 Applied Linguistics for Teachers
- 490 The Selection of Library Materials
- 491 (2 sections) The Acquisition and Organization of Library Materials
- 492 The School Library: Sources of Information
- 494 (1½) Communications Media Programs in Schools
- 496 (1½) Motion Picture Production in Education
- 501 (1½) Fundamentals of Human Learning and Motivation
- 504 (1½) Special Topics in Human Learning and Instruction
- 508 Review of Research in Methods of Teaching Art
- 508 Review of Research in Methods of Teaching Social Studies
- 510 The Development of Science Curriculum Materials
- 523 Comparative Education
- 525 Social History of American Education
- 536 Individual Tests
- 539 Educational Television
- 549 (1½) Problems in Teaching Secondary School Mathematics
- 552 Basic Contributions to Administrative Thought
- 556 (1½) Administration of the Educational Program
- 557 (1½) Administration of the Elementary School
- 558 (1½) Administration of the Secondary School
- 561 Laboratory Practicum
- 562 (1½) Curriculum Organization in the Elementary School
- 563 (1½) Curriculum Organization in the Secondary School
- 565 Special Course in Mathematics
- 565 Special Course in Earth and Space Science
- 565 Special Course in English
- 565 Special Course in Foundations
- 569 The Regional, Junior or Community College
- 576 Advanced Seminar in the Supervision of Instruction
- 580 (1½) Problems in Education — Guidance
- 583 Advanced Seminar in Adult Education
- 590 Current Developments in Higher Education
- 677 (1½) Theories of Vocational Development
- 678 (1½) Counselling Theory and Procedures

INDUSTRIAL EDUCATION

- 356 Electronics in Industrial Education I
- 358 Electronics in Industrial Education II
- 359 Millwork Theory and Practice
- 452 Technology of Building Construction I
- 453 Automotive Theory and Practice I
- 454 Patternmaking and Foundry Practice
- 457 Technology of Metalworking III
- 463 Technology of Synthetic Materials
- 467 Automotive Theory and Practice II

HEALTH

Continued from Page Four

end of the Second World War has been out of whack. Only 30 per cent of medical graduates went into family practice in Canada during the 1960s. There are many reasons for this preference for specialized practice. One is that the examples of medical practice in the clinical training of students have been predominantly specialized. If physicians are to be able to work in a community health centre, they should be trained in such a setting."

But ironically the ideal community health centre operating in the best of all worlds could make little use of family practitioners as they are now trained, according to Dr. D.O. Anderson, professor and head of the Division of Health Services Research and Development in UBC's Health Sciences Centre.

Community health centres can theoretically be divided into three separate but related spheres of activity, says Dr. Anderson: health surveillance, restoration and maintenance.

Health surveillance of the population might be automated. A patient's urine or blood specimen might be routinely screened by mechanical methods for abnormalities. Computers and special technicians would be heavily involved here.

If something abnormal is discovered, and if the abnormality or disease can in fact be treated, then the patient would be sent to the health restoration area of the community health centre. No one really knows how much health restoration would be done by physicians. Perhaps a major role would be played by specialists in nursing, rehabilitation medicine or other non-medical health groups.

DETECTION ROLE

Patients passing from health restoration would go to the health maintenance area of the community health centre. Here groups of specially trained, non-medical health staff would ensure that the patients' health was kept up and directions followed. The staff would be trained to detect whether patients needed to be referred once again to the health restoration group.

Dr. Anderson says that this structure assumes the presence of physicians only as a part of the health restoration group of the community health centre. The majority of health professionals in the centre would be non-medical; the physicians would be called upon to do only what they can do best. They would be superb diagnosticians and therapeutic specialists, says Dr. Anderson.

The gatekeepers to this kind of system, the people who would make first contact with the patients and decide what services are best suited for them, could be specialists in preventive medicine or primary care. Dr. Anderson says they could be either a new breed of family "physicians" or specially trained nurses such as a new type of nurse often mentioned in this role, the "nurse practitioner."

This is a highly contentious issue to family physicians. They have had to weather for years the abuse and predictions of colleagues in medical specialties that family physicians would be replaced by specially trained nurses.

According to Dr. Anderson, their fears may be ungrounded. B.C. has more family doctors per capita than any other province. If community health centres were established in B.C., use would be made of the manpower already available and it would be unlikely that other health professionals would be trained for the same role.

UBC's first mini-community centre was opened near the Vancouver General Hospital and is called a Family Practice Teaching Unit. Its opening was delayed for two years while the Faculty of Medicine found money to support it. Under the provincial medical payment scheme, only the services of a doctor are paid for in community health centres. The salaries of other health professionals must be financed out of the physicians' fees. This difficulty, common to many other provinces, must be removed before community health centres can be opened on a large scale. UBC subsidizes part of the salaries of non-medical health professionals.

The community health centre near VGH has on its staff two full-time and one part-time family practitioners, a registered nurse, and a family health nurse who has received further specialized training, a social worker, a home economist, a part-time physiotherapist and a part-time pharmacologist.



UBC's REACH medical centre on Commercial Drive in Vancouver's east end is headed by Dr. Roger Tonkin, shown chatting with a visitor outside the Centre. Picture by Peter Thomas.

Medical students from each year of the four-year medical program are taught by family practitioners in the unit. First-year students learn to interview patients. By their fourth year they are allowed to do a complete examination of patients, make a diagnosis and suggest treatment. They visit patients in hospital and make house calls with nurses attached to the unit. The fourth-year students are also encouraged to deliver babies under the supervision of family practitioners attached to the unit.

Other health students are tutored by members of their profession and integrate with other health students and health professionals.

The registered nurse, for example, is responsible for co-ordinating the movement of patients from one health professional to another or from one treatment centre to another. She arranges for tests, after consulting a physician, and carries out some of them herself.

After the first examination by a physician, the family health nurse is responsible for care of the mother during the pre-natal period and the period immediately after birth. She is trained to deal with minor childhood illnesses and does most of the birth control counselling at the unit. She also explains to parents the growth and development of children. The family health nurse works in close co-operation with a physician.

She makes hospital visits to ensure that the transition of patients from the hospital to convalescence is continued. And she makes house calls on patients suffering from such conditions as high blood pressure, congestive heart failure and arthritis, checking their condition and medications.

The social worker visits the homes of patients to assess the home environment, helps patients get in touch with social organizations or employment agencies and does individual, marriage and family counselling.

WEIGHT LOSS

The home economist gives diet information to mothers while they are pregnant and after the birth of their child, and provides special diets to patients with individual problems such as obesity and ulcers. Dr. H.C. Slade, director of the unit, says the extra time and information nutritionists are able to give patients has resulted in the best record of weight loss he has seen.

The physiotherapist is involved in the treatment of muscle spasm and strains, a common complaint among athletic school children and working men. She also counsels patients with chronic respiratory problems, who benefit from breathing exercises, and provides rehabilitation exercises and treatment for arthritic patients, often following up treatment in the home or where the patient works.

Another Family Practice Teaching Unit was opened in UBC's new James M. Mather Building on the University campus last summer. Compared with the middle- to working-class clientele of the Family Practice Teaching Unit at VGH, the Unit on the

University campus caters to a large segment of young student and faculty families. Within two minutes of opening its doors in the James M. Mather Building last fall, while office and medical equipment was still being unpacked from boxes, a mother wheeled a pram down the walkway into the Family Practice Teaching Unit and the unit unceremoniously was in business.

It has two full-time family physicians, a half-time pediatrician, a public health nurse, a social worker, a clinical nurse and secretarial staff. Students in medicine, nursing and home economics now pass through the Unit. Eventually, as the Unit's case load increases, other physicians will be added to the Unit, bringing it closer to a community health centre.

A large investigation is now going on to find out how effective a team of health professionals is in meeting the primary health needs of patients. Called Project TEAM — which stands for Team Effectiveness And Measurement — the study is being done through UBC's Department of Health Care and Epidemiology which is responsible for the Family Practice Teaching Units. The investigation began last year, financed by the Department of National Health and Welfare, and is made up of five sub-studies.

One sub-study is developing a computerized record system. Another is finding out how patients view their needs. This is linked to a third sub-study which deals with the health professionals' assessment of the patients' needs. Researchers expect to find some discrepancy between the two views.

The fourth sub-study's long-term goal is to determine whether it costs more or less to provide primary health care to patients through the health team than through the present health system. The investigation's aims are related to the level of needs of the patients. The first task, though, is to identify and determine costs of the various activities provided by the health team, such as how much it costs to teach students and how much to serve patients. Results so far show that about 68 per cent of the costs go to patient services and 32 per cent to teaching.

The last sub-study is to make researchers aware of any effect they have on the operation of the Unit and to decrease the professional barriers between the health team members.

REACH has received more publicity than UBC's two other mini-community health centres. Its style and origin are different from those of the Family Practice Teaching Units. It opened in mid-1969 on Commercial Drive in Vancouver's Grandview area at the invitation of the Grandview-Woodland Park Area Council. Dr. Sydney Israels, head of UBC's Department of Pediatrics, put down the first month's rent out of his own pocket for the former fruit and vegetable shop.

REACH was opened on a shoestring by Dr. Roger Tonkin of UBC's Department of Pediatrics. He received a grant from the John and Mary Markle Foundation. The type of grant was for investment in

*Please turn to Page Ten
See REACH*

REACH

Continued from Page Nine

a promising young medical man and not in buildings or equipment. It went towards paying part of his salary. With the grant in his pocket he applied for more funds and got grants from the Vancouver Foundation. Local and medical students helped him convert the premises into a health centre.

One-third of the population around REACH is Chinese and one-third Italian. They provide the stability of the area. Most of them have their own family physicians and medical insurance.

The bulk of REACH's clients are the type of mobile population that uses many services. Their problems are usually multiple — marriage crises, children doing badly in school, chronic skin, ear and nose infections, poor living conditions.

The other group of afflictions could be classified as rejects from the present health system. For example, people with chronic psychiatric problems. Often family physicians in conventional practice don't handle these cases well, not because they don't have the ability but because they simply don't have the time.

Perhaps an abnormally high percentage of the patients at REACH aren't covered by medical insurance because of various loopholes in the insurance system. Newcomers to Canada, for example, must wait 12 months before becoming eligible for government-assisted insurance. This is typical of most provincial systems. Some months REACH writes off up to 25 per cent of professional fees as uncollectable. When REACH patients with neither insurance coverage nor money need to be referred to specialists, Dr. Tonkin says, the specialists in private practice often don't bother to bill them.

REACH — a non-profit, charitable association run by a board of health professionals, housewives, teachers and others — is basically financed through two channels. One is the B.C. government's Medical Services Commission, which covers medical services provided by two full-time and one half-time family physicians, a full-time pediatrician (Dr. Tonkin) and a half-time pediatrician, a registered nurse and a nutritionist.

Backing up the medical side of REACH is a lab in the back of the Centre where routine tests are done,

and a pharmacy. Patients without insurance pay a flat \$2 fee for lab work regardless of what is done. The pharmacy provides REACH patients with prescription drugs at cost. The few who can't pay get them free.

Highly innovative services have been financed through federal Local Initiative Program grants which will total \$110,000 by this spring. LIP grants are the second major source of financing. Two dental assistants and a nutritionist are on LIP grants. Soon, two more nurse practitioners, a writer, project coordinator and others will be hired.

Before REACH opened, a survey was made of the district's health needs. Apart from dispelling the area's welfare image, the survey drew attention to a serious need for dental care. REACH opened a small preventive dental program, which has now moved into an adjacent office formerly used by a real estate company. By the end of this year it will hopefully increase from a three-chair operation to six chairs in a large office across the street. REACH has limited itself to preventive dentistry during the day. Two independent evening services offer dental care at REACH. UBC dental students, under supervision, volunteer "free" dental care two evenings each week. This isn't part of their academic program. The Vancouver and District Dental Society operates a fee-for-service emergency clinic every evening.

"We decided to stick to prevention," Dr. Tonkin said, "because if we opened our doors to treatment we'd be flooded and we'd never get around to our primary aim, which is prevention. We've been told that the only way of reducing the long-term incidence of dental disease in the area is to concentrate on prevention."

Like the Family Practice Teaching Units, REACH is most interested in the treatment of families in its own community. But two years ago, when the youth community was in great need of health services, REACH was able to respond and youths from all over the city made their way to the centre. REACH staff was soon able to interest and co-ordinate other agencies in the city to look after the youths so that REACH could return to its first priority, providing service to its own community.

REACH nutritionists have been involved in the vegetarianism and food fads which youth has recently

AWARDS TALKS SET

The Killam Scholarships program administered through the Canada Council will be discussed at three meetings on the UBC campus on April 3 and 4.

Visiting UBC to describe the program will be Mrs. Erika von Conta Bruce. The overall intent of the program is to support outstanding research, outstanding scholars and promising post-doctoral students in the arts and sciences.

Killam Scholarships fall into three categories:

1. Senior Research Scholarships "to support scholars of exceptional ability engaged in research projects of far-reaching significance." The awards are for research in the humanities and social sciences and interdisciplinary studies in which there is an effort to link any of the sciences, medicine or engineering with any of the social sciences or humanities.

2. Killam Post-Doctoral Research Fellowships. A total of six fellowships are offered annually, three in

the social sciences and humanities and three in the sciences, medicine or engineering.

3. Izaak Walton Killam Memorial Scholarships are designed to honor and assist distinguished research workers in the sciences, medicine and engineering. The awards of up to \$30,000 a year are designed to allow individuals to develop a major new synthesis or activity.

Deans, department heads or their designates will discuss the program on April 3 from 9:30 to 12 noon in the Board and Senate Room of the Main Mall North Administration Building.

On April 4 interested members of the faculty are invited to discuss the program from 9:30 to 12 noon in the Board and Senate Room of the Main Mall North Administration Building. Graduate students and post-doctoral fellows are invited to a discussion on April 4 from 2:30 to 4:30 p.m. in the Board Room of the Thea Koerner Graduate Student Centre.

JOBS

Continued from Page Three

whole, 1972 graduates of the Faculty of Applied Science had a bad experience. The overall unemployment rate in 1972 was 11.4 per cent, up from 4.9 per cent in 1971. There was considerable variation in the unemployment rate, however, when looked at on an option basis. Two options — Mineral Engineering and Engineering Physics — had a zero unemployment rate, but the rate for the Faculty's seven other options varied between five per cent (Chemical Engineering) and 20 per cent (Agricultural Engineering). There were, however, only five graduates in the latter option. The three options with the highest unemployment rates just below Agricultural Engineering were: Electrical — 15.8 per cent; Civil — 14.3 per cent; and Mechanical — 10.5 per cent.

There are strong indications that the situation for engineers will improve substantially in 1973. U.S. surveys, the UBC Office of Student Services and the comments of UBC faculty members all point to this. Here is a breakdown by various options.

Electrical Engineering. Department head Prof. Donald Moore says more students — 32 or 33 — have jobs this year than at the same time last year, when some 23 had found employment.

Prof. Moore says that if the economy continues to improve there's likely to be a shortage of engineers in Canada by 1975-76. He bases his prediction on an American manpower report delivered to the U.S. Congress in 1972. The report says there is already a widening gap between the supply of engineers and demand in the U.S. And Canada, Prof. Moore says, usually lags behind the U.S. by a couple of years.

Mechanical Engineering. Dr. James P. Duncan, the head of the department, says his graduates are receiving more unsolicited enquiries regarding summer jobs and he feels that this is a harbinger of better full-time job opportunities. Another member of the department feels partial revival of the aircraft industry in eastern Canada will mean some new jobs. Prof. Duncan says he's just returned from a conference in California where the situation referred to above by Prof. Moore was discussed. Prof. Duncan feels that the U.S. engineering manpower problem will mean that Canadians will be

offered jobs in the U.S., thus worsening the Canadian supply situation. As for his 1973 class of graduates he says jobs won't be easy to come by but he expects all will be employed within three months of graduation. About 50 per cent had job commitments by mid-March.

Mineral Engineering. Department head Prof. John B. "Blue" Evans says there are as many jobs available for his graduates in 1973 as there were in 1972. His problem is that he has twice as many students graduating in 1973 and, as a result, half of them have still not found jobs.

Metallurgy. Prof. Edward Teghtsoonian, the head of the Metallurgy department, says virtually all his graduates have had job commitments for a month or more, which is an improvement over last year and comparable to the situation three years ago. All metallurgy graduates will be working in Canada this year.

Civil Engineering. Demand for civil engineers is increasing, according to the Association of Professional Engineers, but employers want men with experience. Students who have had experience during the summer will probably stand a better chance of employment, particularly those who have had experience on municipal projects such as sewers and roads.

Mr. Eric Evans, Pacific area manager for the Technical Service Council, an industry-sponsored, personnel consulting organization in the fields of engineering and commerce, says UBC engineering graduates are regarded as among the best educated in Canada.

He advises engineering graduates not to be discouraged by unemployment figures because a lot of people who are said to be currently unemployed are in reality between jobs as a matter of choice. He says many companies which employ engineers are in a variety of businesses and are looking for graduates who are adaptable and flexible. While they don't want job-hoppers, he says, they don't regard an engineer who has had two or three years' experience with another company as being unstable.

School of Architecture. Prof. Henry Elder, the School's director, says that in the past three months there has been an upward swing in the demand for architects. He doesn't expect his students will have problems this year.

Mrs. Lorraine Sharrock, executive secretary of the Architectural Institute of B.C., confirms that there is an

increasing demand for architects with experience. The Institute has 20 vacancies listed at the moment, whereas last year at this time there were virtually none. Many of the openings are outside the Vancouver area and it helps to be mobile, she says.

School of Nursing. UBC will this year graduate some 92 nurses with degrees and diplomas and there are twice that number of jobs waiting for them. The ten who will graduate with a master's degree will be in even greater demand, says Dr. Muriel Uprichard, the School's director. Demand is high in metropolitan areas and even higher elsewhere.

FACULTY OF COMMERCE AND BUSINESS ADMINISTRATION. Commerce graduates of 1972 experienced a significant improvement in job opportunities over 1971. The unemployment rate dropped from 13.4 per cent in 1971 to 5.2 per cent last year and there is every indication of another improvement this year. Graduates in the accounting option are in particular demand and Master of Business Administration graduates are almost all employed now, according to the Office of Student Services.

FACULTY OF AGRICULTURAL SCIENCES. The Office of Student Services did not survey the post-graduation activities of students from Agricultural Sciences. A check with Faculty department heads indicates that there are adequate job prospects for the 1973 class.

Prof. Warren Kitts, head of both Animal and Poultry Sciences, says demand for graduates in these two areas has remained stable in recent years and he has yet to hear that a 1973 graduating student lacks a job.

Prof. William Powrie, head of Food Science, says opportunities are expanding for his graduates and there simply aren't enough graduate students to fill the posts available. He says it's a bit too early to make predictions about jobs for the 1973 class.

Prof. Charles Rowles, head of Soil Science, says more and more opportunities are appearing for Soil Science graduates but not every one in the 1973 class has a job yet. He says he expects the provincial government's controversial Bill 42, if implemented, will affect the demand for soil scientists.

FACULTY OF EDUCATION. Persistent reports of a teacher surplus in B.C. are misleading, according to Miss Ann Dahl, of the Employment Information Service of

been experimenting with. Now the shift of emphasis is to the needs of older people in the community. The LIP-sponsored nutritionist is especially concerned about geriatric problems in the community. By working with groups in the community she is showing older people how best to take advantage of the recent increase in old age pensions so that pensioners can have a balanced diet and yet have some money left over for other things.

An old bakery next door to the original REACH clinic has been taken over and converted to a meeting place for older people in the area. Some haven't been out of their rooms for 18 months. The drop-in centre is linked to the geriatric nutrition thrust.

The first student legal aid office in Vancouver was opened at REACH by UBC law students and still operates there one night a week. The centre has also been used by the City of Vancouver health and welfare departments. Medical and pharmacy students are taught at the clinic.

On a less formal basis nursing and social-work students visit the centre and dental hygiene students work at the clinic under the supervision of local dentists and dentists of UBC's Faculty of Dentistry in the evenings.

REACH follows a different philosophy from the Family Practice Teaching Units, a different style. Though finding the money to open the Family Practice Teaching Units was as difficult as scraping up the money to start REACH, the clinic on Commercial Drive remains more financially vulnerable. Its LIP grants won't last forever. Careful structuring of the Family Practice Teaching Units aims primarily at training students and the public through the health team. REACH has adopted a more flexible structure. That's the way Dr. Tonkin prefers to have it.

"I hope REACH continues to be a small operation with good people attached to it who are interested in exploring the frontier. While other groups are now getting into some of the health needs of youth, we've already moved on to something else.

"If you think of research in terms of an experimental design, then I have to say that we're not doing any. But as far as I'm concerned the whole place is research because we're trying to find out things that are new to Canada."

the B.C. Teachers' Federation. There has been a surplus in the Greater Victoria and Vancouver areas for some years, she says, because some teachers refuse to leave these areas for rural districts where opportunities are plentiful.

Additional grants made to some school districts resulted in a flurry of hiring in late 1972 and early 1973 with the result that the number of teachers seeking work through the BCTF was reduced from 530 to 230.

The provincial Department of Education says B.C. universities supplied less than 85 per cent of the beginning teachers required in 1972 and less than 75 per cent in 1971. Reduction of class sizes this year from 30 to 25 at the elementary level will mean a higher demand for teachers.

All this adds up to a fairly rosy picture for 1973 Faculty of Education graduates, especially if they're prepared to go anywhere. Specialists in home economics, instrumental music and special education are in great demand.

FACULTY OF DENTISTRY. Most Dentistry graduates initially associate themselves with an established dentist to get experience before branching out on their own, according to Faculty Dean Dr. S. Wah Leung. In most cases this association is arranged on a private basis. In general the metropolitan areas and the Okanagan are well supplied with dentists, but there are opportunities galore in the Kootenays and the north, according to Mr. Ken Croft, the managing director for the College of Dental Surgeons of B.C.

School of Rehabilitation Medicine. Graduates of this School in the Faculty of Medicine have had no problems in recent years in finding employment and there are plenty of positions available in 1973, according to the School's director, Dr. Brock Fahrni. Demand is high in metropolitan areas and there are even more openings in rural areas.

School of Community and Regional Planning. Students in this School in the Faculty of Graduate Studies are deeply involved in writing their graduating theses at the moment, so only a quarter of the 17-member graduating class have job commitments. The School's acting director, Prof. Brahm Wiesman, says he doesn't anticipate the rest will have problems finding positions. A recent survey by the School of its 190 graduates revealed that only two were unemployed.

MATHER UNIT TO OPEN

The University of B.C.'s James M. Mather Building on Fairview Avenue on the east side of Wesbrook Crescent will be officially opened at 4 p.m. Wednesday, April 4.

Present will be UBC's Chancellor, Mr. Justice Nathan T. Nemetz; other members of the University's Board of Governors; President Walter H. Gage; Dr. John F. McCreary, Co-ordinator of Health Sciences at UBC; and Dean David Bates of the Faculty of Medicine.

Officially opening the building will be Mrs. James M. Mather. The building will be named in honor of her late husband, who played a leading role in establishing UBC's Faculty of Medicine and developed what was formerly the Department of Preventive Medicine, now incorporated into the Department of Health Care and Epidemiology.

Dr. Mather was head of preventive medicine at UBC for 14 years and was assistant dean of Medicine for seven years before retiring in 1966.

Almost completely obscured by its magnificent treed surroundings, the building is still unknown even to most people familiar with the UBC campus.

A number of health groups are housed in the two-storey building. One is the Faculty of Medicine's second Family Practice Teaching Unit, designed to show students in the health sciences the type of health problems they are likely to face in general practice.

Health professional students will also be taught to work together as a health team and to share responsibilities rather than work separately as unco-ordinated individuals.

About 2,500 persons from the Wesbrook area are registered with the Unit as patients. The Unit can handle up to 5,000 people and is especially interested in providing health care to families.

UBC's first Family Practice Teaching Unit was opened in 1969 near the Vancouver General

Hospital. Both Units are administered by the Division of Primary Care in UBC's Department of Health Care and Epidemiology, which occupies the first floor of the James M. Mather Building with other divisions in the department, including Epidemiology and Biometry, Health Services Planning, Public Health and Environmental Medicine.

On the second floor is the headquarters of the new Department of Medical Genetics, which will also continue to have clinical space at the Health Centre for Children where most genetic counselling of parents or prospective parents takes place.

The Division of Audiology and Speech Sciences in the Department of Pediatrics is also on the second floor. It formerly operated out of offices above a grocery store near the University.

The division offers a two-year master's program. Six students are currently enrolled. Statistically, about 350 audiologists and speech pathologists should be practising in B.C. Only about 70 actually handle the speech and hearing problems of the province. The division's program is trying to narrow the gap. Sixteen students will enrol in the first year of the program this fall. The program was begun in 1969 through a \$150,000 grant from the Kinsmen Rehabilitation Foundation of B.C.

The building was constructed by the Van Construction Division of Van Vliet Construction Co. for \$801,770. Total project cost of the 26,040-square-foot building was \$1,096,645.

Source of funds was: federal Health Resources Fund, \$526,390; P.A. Woodward Trust, \$422,443; Senator N.M. Paterson, \$50,000; Vancouver Foundation, \$45,000; Kresge Foundation, \$26,812; Kinsmen Rehabilitation Foundation, \$26,000.

Architects were Paul Smith Associates of Vancouver.

DEGREE

Continued from Page Two

making what he calls a "descriptive academic inventory."

Here's what you do. Sit down and list every course you have taken during your University career. Then, think carefully about each course and, in half a dozen sentences, describe the content of each course and what you learned from it.

When you've completed the inventory, match it up with the research job you've done on the industry of your choice. Chances are, says Mr. Krell, you'll be able to link a group of courses you've taken with some aspect of a company's operations.

Mr. Krell cautions that you may not be able to reach your objective immediately and suggests that you look for an opening that will lead eventually to the area you're interested in.

In making an application to a company you should point out that you have taken the trouble to do some research on the company or the industry and indicate that you want to discuss the application of your specific knowledge to the company's operations.

A student, for instance, who is interested in getting into personnel work or industrial relations might not be able to get into those departments immediately, Mr. Krell says. In that case, he says, the student should seek a position in the company's warehouse, say, where he can become familiar with company operations and make contact with employees. At the same time, the job-seeker should make it clear that his ultimate goal is personnel or industrial relations work.

Mr. Krell also emphasizes that industry does a lot of promotion from within and companies are always on the lookout for people who are prepared to learn their operations thoroughly.

Mr. Krell claims that his method has been highly successful. He's never done a thorough survey of the success encountered by those he's counselled, but, of the ones he's done followup work with, he found that 70 per cent of them had found jobs using his technique.

In fact, he said, so many students began to pour in on him for assistance that he had to end individual counselling and meet students in groups to explain his technique. At the moment he's been transferred to a temporary job in Manpower's Richmond office but hopes to return to student job counselling soon.

Students, he claims, don't realize how much potential they have as the result of university study.

The computer science graduate who's hired as a programmer one day may find himself giving a series of lectures to company employees on the application of computer techniques within the company. As a result, the student's training in English, mathematics and computing all come into play, he says.

Mr. Krell has some interesting case studies to prove that his technique works. "I had a girl come in one day with a Bachelor of Arts degree with a major in drama," he says. "She had had an interview with a company that makes pleasure boats and which was looking for a girl who would attend meetings and conventions, set up a booth and talk to people about the company's products.

"I went over her inventory, discovered the drama and theatre courses, and suggested that she go back to the company and try to sell herself on the basis that these courses had given her a feeling for creative arrangement of the company's products." She got the job.

Another student with a degree in urban planning visited Mr. Krell's office after having been turned down at every city and municipal hall he had applied to. "He had prepared an excellent resume," Mr. Krell says, "and his goal was to be a townscape planner.

"We discussed his problem for a while and then I suggested that he investigate the possibilities of employment by a major oil company. I pointed out that these companies often embark on large developments which involve close relations with municipal or city planners in terms of urban planning. It wasn't long before he got a job with a major oil company.

"Another graduate who visited me — a former player for the B.C. Lions — had obtained a bachelor's degree in mathematics. I suggested he try to get in with some company on a training program leading to a chartered accountancy with the aim of becoming a management consultant. Six weeks later he phoned me to say he was launched on the career I'd suggested."

Mr. Krell has a great many more case studies to point to, all of which seem to confirm the more generalized statements of UBC officials concerned with finding jobs for students. In short, students often fail to exploit the potential which their university career has conferred on them.

Maybe Mr. Shirran sums it all up when he says: "I get the impression that many students lack some honest-to-God enthusiasm for a job. Their chances of getting a job will improve if they show some bounce and convince an employer that they're willing to wade in with their sleeves rolled up."

UBC ALUMNI Contact

PREPARED FOR UBC REPORTS BY THE UBC ALUMNI ASSOCIATION



LIVELY ARGUMENT marked Alumni Association-sponsored debate during Open House on the resolution "that formal university education is obsolete." Participants were, left to right, Prof. Geoffrey Durrant, UBC English department; Mr. William

Bruneau, of UBC's Education Faculty; moderator and head of the UBC Classics department, Prof. Malcolm McGregor; Prof. Walter Young, head of UBC's Political Science department, and Prof. John Ellis of Simon Fraser University. Kini McDonald photo.

Debate Decides University Not Obsolete

The Alumni Association's program for UBC's Open House '73 was highlighted by a friendly clash of wits in the Student Union Building.

The occasion was an Oxford Union-style debate on the motion: "Resolved that formal university education is obsolete." About 150 alumni and students were on hand to hear Prof. Walter Young, head of the UBC Political Science department, and Prof. John Ellis, of Simon Fraser University, speak in support of the motion. Their opponents were Mr. William Bruneau, assistant professor of Education at UBC, and Prof. Geoffrey Durrant, of UBC's English department. Chairman of the debate was Prof. Malcolm McGregor, head of UBC's Classics department.

Prof. Young said declining enrolments were indicative of the fact that formal university education as currently practiced is obsolete. The reason why, he argued, was that the university has changed in character over the years.

"We have become in our universities production-oriented," he said. "We are concerned primarily with output. We direct our attention less and less to what education really ought to be all about and more toward producing graduates."

Speaking against the motion, Mr. Bruneau maintained that university education would be obsolete if

the social functions, instruction and research of the university had nothing whatever to do with the real world, but that this was not the case with UBC.

He said certain politicians and progressives believe a university should be a force for social change, but the primary function of the university is to teach a careful, disciplined approach to the problems of learning and of life. "The university," he said, "is not a political force, it's fundamentally a disciplined intellectual force."

Prof. Ellis, arguing for the affirmative, said that formal university education is obsolete because its elements — of full-time, day-time study by young people exclusively — were no longer tenable, and had been proved so by such a new institution as Britain's Open University.

"The second reason why formal university education is obsolete is because the professors are not seriously interested in teaching," he said. "The internal reward system of the university is not based on a professor's teaching record but on the length of his publications list."

A third reason, he said, is that the internal decision-making structures of the university are them-

selves obsolete. "Senates, faculties, departments, personal fiefdoms, tenure — they all institutionalize the status quo and make it impossible for the university to respond to a changed society."

In supporting the motion, Prof. Durrant agreed that some structures and processes of the university needed reform, but maintained that the basic purpose of the university, to develop in people a disciplined approach to learning and a critical approach to life, were as necessary as ever.

"A university is really an attempt to bring minds together so that there will be something like the process of an atomic explosion," he said. "When you get enough intelligent people interested in using their minds together, you get critical mass and extreme radiation."

Prof. Durrant argued that the "world outside is, in general, a cleverly organized stupidity" and "what the community needs from its university products is not well-rounded personalities but sharp cutting edges, critical edges that will cut into the rubbish and nonsense that clogs this society at present."

A vote was held and it was declared that the two speakers arguing against the motion had won the debate.

Governments Urged to Do More Long-Term Planning

Mr. Robert Bonner, chairman of the board of MacMillan Bloedel, has charged that the failure of governments to engage in long-term planning makes it difficult for business and industry to function efficiently.

Mr. Bonner urged governments to conduct more long-term planning and to announce changes in economic legislation in sufficient time to allow business and industry to adjust to the new conditions without loss.

He made the comments in an address to the annual Commerce Dinner attended by about 350 Commerce alumni, faculty, students and downtown businessmen on March 8 in the UBC Faculty Club. The annual dinner, co-sponsored by the Commerce alumni, faculty and students, is designed to encourage closer contact between the University and the downtown business community.

"Government involvement in the private sector is the most flourishing activity in Canada today," Mr. Bonner told his audience. "Public policies can destroy enterprise and we have only to look at the insurance business to see what I have in mind."

He pointed to federal income tax reform, the federal government's proposed new Competition Act

and the B.C. government's new Land Commission Act as examples of increased government involvement in the economy in a manner which has great impact.

"I think the time frame within which government operates is far too short," said Mr. Bonner. "Modern government continues to operate on an annual cycle which it has inherited from an agrarian past."

While the plans and budgets of governments tend to be developed on a year-to-year basis, he said, business and industry are having to plan two and three years in advance due to the complexity of modern economic affairs. Business planning, he said, can be frustrated by changes in government policy brought in too quickly.

"The lead time for the development of a new pulp mill or other enterprise is two to three years," he said. "Within that period there could be at least six budget speeches and the project could be rendered unprofitable before it was completed."

Mr. Bonner also urged businessmen to become more involved in politics in order to close the "comprehension gap" that exists between the business community and the public and the various levels of government.

ALUMNI ANNUAL DINNER

An Evening with S.I. Hayakawa, internationally known semanticist and author.

**Monday,
May 28, 1973**
Hotel Vancouver
6 p.m.
\$6.75 per person.



For further information and tickets: contact the UBC Alumni Association, 6251 N.W. Marine Drive, Vancouver 8, B.C. (228-3313).



MR. ROBERT BONNER, chairman of the board of MacMillan Bloedel, chats with Dean Philip White, head of the Faculty of Commerce, during reception prior to annual Commerce Dinner. Vlad photo.