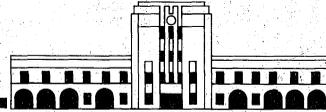


UNIVERSITY NEWS



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UniQuest has \$1.3 million profit increase for 1986

THE UNIVERSITY of Queensland's contract research and marketing company, UniQuest Limited, has reported an increase of \$2 million in annual turnover and \$1.3 million in net profit.

Total sales for 1986, which was the second full year of operation,

were \$4,453,166 — compared with \$2.6 million in 1985.

Net profit was \$1,530,701 compared with \$186,028 in 1985 and \$17,291 in 1984.

UniQuest Limited's annual report for 1986, presented to the company's annual meeting, said total net assets at year end were \$1,758,239 compared with \$357,538 in 1985.

UniQuest, incorporated in 1984, markets the intellectual resources and services of the University on a commercial basis for the benefit of the University.

The company markets processes developed by University researchers while providing consulting and research facilities for the commercial and industrial sectors.

It has six divisions: UniQuest conference systems, an equity projects group, physical science and engineering group, biological and health science group, commercial consulting and social science group and a recently established information technology group.

The Vice-Chancellor of the University of Queensland, Professor Brian Wilson, who is also chairman of UniQuest Limited, said public discussion during 1986 had highlighted the need for industry and educational institutions to work closely together in the national interest.

UniQuest Limited, by virtue of its strategic positioning during 1984 and 1985, was able to capitalise on this significant public interest, and now led the nation in its methods of providing to industrial organisations, the benefits of University-based expertise, research programs and technology.

Professor Wilson said the development of Queensland as a base for the provision of specialist services, and the establishment of technologically based industrial companies, had been significantly helped by UniQuest's activities.



Professor Colin Dobson, of the Department of Parasitology (left), and UniQuest General Manager Mr David Williams with cattle ticks (*Boophilus microplus*) — the subject of a tick vaccine project involving UniQuest Limited, the University of Queensland and Coopers Animal Health Australia Pty Ltd.

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Foundation capital grows — but more slowly

THE University of Queensland Foundation's bank of capital continued to grow last year — but at a slower rate, reflecting uncertainty in the Australian business economy.

This is shown in the Foundation's fifth annual report, which says the Foundation achieved further capital growth in 1986 to reach a total of more than \$1 million in subscriptions and pledges.

Total capital formation grew by \$29,000 last year.

According to the report, the Foundation's capital fund, comprising subscriptions and pledges, stood at \$1,068,000 at the end of 1986, compared with \$1,039,000 at the end of 1985. Total subscribed capital was \$933,000.



The Chief Justice of Queensland, Sir Dormer Andrews (left), with kidney transplant researcher Associate Professor Ian Hardie and Dr Ruth Kerr, of St Lucia, who with her husband Mr John Kerr has contributed to support Dr Hardie's work, in partnership with the University of Queensland Foundation.

The report, which was presented at the University's Staff and Graduates Club, says that the increase of \$29,000 in the Foundation's capital fund was lower than expected.

"To a large extent, the slow growth reflects the prevailing general economic uncertainty which shows up in the patchy corporate results currently being posted and forecast," the report says.

"It also reflects an erosion of disposable personal incomes as a consequence of rising inflation, high interest rates and substantial

increases in many of the involuntary charges upon companies and individuals."

This reflected on new memberships to the Foundation: nine new members were attracted, compared with 25 in 1985.

The report said a number of companies already contributing to the Foundation continued to express their confidence in the importance of university research.

This was a recognition that research can lead to the development of new knowledge and processes and products, and assist in regaining an equilibrium in the international trading account missing in recent times.

However, a number of other companies had not yet given tangible endorsement of the concept of the Foundation and the part it was playing in research at the University.

The Foundation supports important research projects which would otherwise languish without funding from traditional services.

This apparent lack of interest in the purpose of the Foundation raised a fear that a more serious resolve and commitment to university research was needed in the wider corporate area if Australia's manufacturing and marketing performance was to be effectively lifted to the level appropriate for a nation which had so much going for it.

Because of economic uncertainty in the business area the Foundation would concentrate its activities in 1987 in the personal sector, and was investigating new types of fundraising.

The Chief Justice of Queensland, Sir Dormer Andrews spoke at a presentation of certificates of membership ceremony after the meeting.

The Foundation's first woman member of the Board of Governors, Miss Elizabeth Ann Nosworthy took up her appointment for a 12-month term. She is also president of the Queensland Law Society Inc.

Extra benefits for U.Q.

• Continued from page 1

He said UniQuest's benefits to the University as well as industry were also significant.

In 1986 UniQuest had been responsible for the purchase of \$233,484 of capital equipment for University departments, and had provided employment for 95 postgraduate students, research staff and technicians in the University.

Benefits to the University would be expanded by the addition of four postdoctoral fellows, and eight postgraduate scholarships during 1987.

The research performed under UniQuest contracts had often generated a considerable need for further fundamental research, and it was the intention of UniQuest to provide financing for that research as part of its contract structure.

It was, of course, important to recognise that UniQuest was already funding basic research which in earlier times would have been funded from traditional sources.

Bridging finance had been provided and research projects underwritten through the year in an attempt to advance projects and earn a greater University equity prior to their being licensed to a third party.

Professor Wilson said bridging finance would become an increasingly important UniQuest service to University researchers, and had the particular advantages of keeping research teams together, once established, and giving academic staff the ability to act decisively when attempting to engage new research staff with rare and sought-after skills.

UniQuest's General Manager Mr David Millhouse said: "It is of great significance to Queensland that of all the university marketing organisations throughout the world, UniQuest is one of the top 10 in generating profit from university technology sales.

"This can be seen as a vote of confidence by the community in UniQuest, the University of Queensland, and the future of innovation and technology transfer."

Mr Millhouse said UniQuest had achieved stunning results which were extremely pleasing as it reflected the level of professionalism of the university staff as well as UniQuest's entrepreneurial management philosophies and marketing strategies.

For further information, telephone Mr Millhouse on 377 2899.

Psychology study focuses on attention disorders

A UNIVERSITY of Queensland research group is studying a psychological problem which causes some apparently intelligent children to fidget and lose concentration in the classroom.

With the condition, children may be inattentive, lack concentration, and often fail to finish tasks.

The children are easily distracted, and only maintain work performance if given individual encouragement.

The \$25,000 project, funded by the Australian Research Grants Scheme, will include a study of about 60 eight-to-12-year-old children, many diagnosed with the problem.

Professor Steven Schwartz, in the University's Department of Psychology, and colleagues Ms Annette Hall and Ms Tracey Adams have been examining a condition which has been known by various terms in the past but is now called attention deficit disorder.

Children with the condition have been known as minimal brain damage children; minimal brain dysfunction children; hyperactives, and hyperkinetic children.

Professor Schwartz said the problem with many of these terms was that they were specific titles to describe a condition that was still not precisely defined. This was one of the aims of the University of Queensland research.

Hyperactivity, for example, implied there was a problem with activity, while the major problem might be poor concentration. Minimal brain damage implied something had damaged the brain, and since this may not be the case, another, more general term was required.

"The title of attention deficit disorder focuses on children with learning problems of poor concentration and inattention which may affect school achievement and cause the greatest heartaches for the child, the parents, and teachers," Professor Schwartz said.

Attention deficits were frustrating because the children apparently had normal intelligence, had trouble learning to read, doing mathematics or otherwise keeping up with the normal school curriculum.

Attention deficit disorders were also very selective, he said. The child might play a favourite video game with great accuracy, but when



Research assistant Ms Tracey Hall demonstrates an electroencephalograph (EEG) cap to a child taking part in a research study to improve understanding of children's learning problems.

asked to perform in the classroom, interest disappeared within seconds.

Professor Schwartz' research group aims to provide a more precise definition of the condition, which is known to have other symptoms, such as impulsiveness, and over-active behaviour. Attention deficit disorders also are persistent conditions, starting when the child is very young (under the age of seven).

Professor Schwartz said initially, researchers in different disciplines such as education, psychology, medicine and anatomy had pursued separate lines of inquiry about children's learning problems, including attentional deficit disorders.

Now there was a good deal of knowledge which could be shared to see if any common pattern emerged.

Professor Schwartz and his research team are linking various approaches to provide a broad understanding of the condition, so diagnosis and treatment could be improved.

One avenue being pursued by researchers is a study of brain wave

responses known as event-related brain potentials (ERPs). The brain wave responses are measured by electroencephalograph (EEG) output to a microcomputer, which takes a reading.

The ERPs study, when linked with behaviour observations, could pinpoint the differences between normal children and those with the attention deficit disorder. Professor Schwartz said this could assist in diagnosing the condition, and predicting response to different treatments which were often imprecise at present.

One of the ways used to treat the condition was stimulant medication. In the short term, use of stimulant drugs such as amphetamines helped concentration, which in turn helped behaviour.

By studying children on-and-off medication, researchers will be able to assess the effects of the medication on brain functioning and design specific treatment programs for individual children.



Comment

By Professor Brian Wilson, Vice-Chancellor

APPROVAL WAS given by the University Senate on May 11, for this institution to enter into a formal agreement with the two other Queensland universities to mount a display at World Expo 88, in Brisbane from April 30 to October 30 next year.

Univations, as the display will be called, is a novel and exciting project. It is believed to be the first university-mounted display at a World Expo, and is certainly the first co-operative venture of this type and scale by the three Queensland universities. Because of the international nature of the World Expo 88, Univations will not just be projecting an image of the Queensland universities to Queenslanders, but will be giving an international audience a feeling for the Australian university system. It is therefore both an opportunity and a challenge.

As previously reported in *University News*, the opportunity presented to the universities by the Expo Authority is significant — 450 square metres of ground-level space in an existing building, in a prime location, near the main entrance and the monorail station. Visibility is therefore guaranteed before a projected Expo 88 audience of eight million over six months. The challenge is to stage, on a limited budget, a display which is competitive in an international environment. We cannot afford to be in Expo and not do it well.

Even at this early stage, I am confident that Univations will be an imaginative and exciting display which will do credit to the universities. Last November, a steering committee representing the three universities was established under the entrepreneurial leadership of Mr Alan Coulter, Director of this University's Prentice Computer Centre. In just a few months, that committee, its small management group and its specialist advisers have developed a concept which does justice to the universities and is worthy of an international event. Expo Authority chairman Sir Lew Edwards has commented favourably on the rapid progress and professionalism which have characterised the universities' project so far. The emphasis has been on volunteer effort and imagination, wide consultation with academic departments of the three institutions, and a willingness to produce a quality display within constraints of time and money.

The theme of Univations will be University Research — the Basis for the Age of Technology, which complements the Expo 88 theme of Leisure in an Age of Technology. Major segments will be Water, Earth and Space and Communications. Plans include rare film of coral spawning, a model of the next generation spaceshuttle being developed with technology from this campus, genetic engineering and laser applications. Video material incorporated in the display will highlight the contribution of the social sciences and humanities. All departments have been invited to contribute suggestions for a special display segment featuring a research project of the week. An interactive computer-based video system will

provide course information for students whose interest has been stimulated.

But why do universities need to spend time, effort and resources in this kind of activity when their principal business is the extension, preservation and dissemination of knowledge, and when there is no shortage of students? The simple answer is that universities must tell their story if they want understanding and support from the community. Political realities demonstrate that we are well short of where we want to be. Even at a time when universities are very much on the national agenda, principally because of the two issues of inadequate student access and the need for a brain-based solution to national economic difficulties, universities are still facing declining resources and insufficient support and understanding from politicians — people whose job it is to read and reflect public opinion.

It is worth remembering that fewer than eight percent of Australians have university or college degrees. A vast number of people have had little or no contact with universities, don't appreciate the contribution of universities to economic and social well-being, and have never contemplated university study in their education options.

We must realise too, that the university system in Australia is moving into a dynamic era with change manifest in many ways. The Federal Labour Government, even with its philosophical commitment to free education, is beginning to move to a user pays principle. The Federal Opposition proposes to go even further, with deregulation not just in terms of funding sources, but in terms of the traditional differences between universities and colleges in the binary system. One college of advanced education has already changed its name to university and at least two others appear interested in following suit. A private university will soon open in this State. The Government's own advisors and the Opposition are pushing for a more pragmatic approach to research funding which could fundamentally alter universities' concepts of excellence in scholarship and research. Universities are competing more openly with other claimants for philanthropic and business dollars as traditional government funding sources contract.

Universities do not operate in isolation from the community. Maintaining a climate of acceptance in the community will therefore be an important precondition in this era of change if judgments favourable to universities are to be made by governments, industry, shareholders, students, benefactors, taxpayers and others who pay the bills. The public memory however is short and needs constant refreshing. We must speak in many different ways to a wide range of audiences, not just to those who know us well, or who want to study here. Universities are expensive, but must be seen for what they are — a blue-chip investment in the future. That is why Univations and participation in World Expo 88 are important.

Higher education funds down, AUSTUDY up

A REDUCTION in the general recurrent grants for higher education institutions, an increase in AUSTUDY allowances, and an increase in the Overseas Student Charge are key features for higher education in the Federal Government's Mini Budget.

Recurrent grants for higher education institutions (universities and CAEs) will be cut by \$12 million in the second half of 1987-88 and by \$24 million in 1988-89 — about one percent of total recurrent expenditure.

The reductions will be implemented from January 1, 1988.

AUSTUDY rates for tertiary students will be increased by up to 9.1

percent from 1988 and by up to 33 percent for secondary students, although access to the AUSTUDY independent allowance will be tightened.

The measures are designed to eliminate any financial incentive for young people to leave the education system and shift onto welfare.

The tertiary AUSTUDY weekly rate for 16-17 year olds will remain at \$50 while the rate for those over 18 will rise from \$55 in 1987 to \$60 in 1988.

The Overseas Student Charge (OSC) for new overseas students studying in higher education and TAFE institutions in Australia will be increased to 55 percent of full av-

erage cost to the Commonwealth over the triennium 1988-90.

The OSC for continuing students in higher education will remain at 45 percent or 32 percent of full average costs, depending on the year in which tertiary studies were begun.

The increases are expected to raise \$6.8 million in 1987-88 and \$10.8 million in 1988-89 and will result in a corresponding reduction in the contribution from the global aid vote towards the education of students gaining entry under the quotas.

Total cuts for education (including Universities, CAEs, TAFE and secondary schools) are \$72.1 million in 1987-88 and \$132.3 million in 1988-89.

Cuts hinder education's economic input

AN ANNUAL reduction of \$24 million in the recurrent grants for universities and colleges would not help restore vitality to the national economy, according to the University of Queensland's Vice-Chancellor, Professor Brian Wilson.

Universities had a unique role to play in the establishment of new industries — one of the stated goals of the Treasurer's May 13 economic statement, but would be seriously affected by the higher education cuts announced in the statement.

Professor Wilson said there was wide acceptance in the community that Australia's international competitiveness depended on increased emphasis on brain-based technology, and a reduced reliance on traditional primary industries. Universities had a special contribution to make to national economic recovery — university research provided technology on which new industries could be based.

Professor Wilson said the University of Queensland's contract research and marketing company, UniQuest Ltd, had been involved in the establishment of 11 new companies in less than three years. Australian technology was being marketed internationally as a direct result of this.

Universities had already been hit hard in the last decade, suffering reductions in real terms of about one percent per year. In view of the stringencies imposed by cuts so far, it was difficult to see how this additional reduction would help achieve the government's aim of encouraging increased efficiency in higher education institutions.

The University of Queensland had already taken far more significant steps such as structural reorganisation, introduction of computerised financial management systems, reviews of academic activities and performance, enhancement of teaching efficiency through the introduction of computer-assisted learning programs and the establishment of alternative sources of income.

Cuts in recurrent funding would simply result in less money for teaching and research. The options were to reduce quality — which was unacceptable — or to reduce student

access, course offerings, postgraduate support and research activity.

"When the government stresses the need for new technologically-based industries, it is difficult to see the logic in cutting funding for institutions which both contribute to the pool of commercially exploitable ideas and provide the highly trained personnel to develop technology-based industries," Professor Wilson said.

It was also difficult to reconcile the higher education funding cuts with the welcome increases in AUSTUDY which encourage student participation in education at both the secondary and tertiary level.

—10 kilometre run — just for fun—



Eight hundred runners set off from the University of Queensland's first home — Old Government House, George Street — on the 10 kilometre Ansett-University of Queensland fun run. Education student Peter Berney won the men's division in 31 minutes 18 seconds and occupational therapy student Carole Connolly won the women's event in 36 minutes 35 seconds. Both were record times.

Book Fair success

The fifth Alumni Book Fair and Rare Book Auction held on April 25-30 in Mayne Hall has now concluded with a resulting profit of \$85,000 or nearly 30 percent higher than in 1985.

The Book Fair committee wishes to thank all who have contributed to this result: the University firstly for providing accommodation for the processing and storage of books, and for allowing us to use Mayne Hall for the Fair; the Vice-Chancellor, Professor Wilson, and the former Deputy Vice-Chancellor, Mr Ritchie, for their support, Mr Calcutt, Mr Humble and his staff, Mr Keane and his staff, Mr Whitfield and his staff, Mr Franks and his staff, Mr Colbran and Mrs Templeman of Mayne Hall. We are most grateful also to Lt. Col. Venz for transport provided by the University Regiment and the most efficient and cheerful assistance of the drivers.

The University of Queensland Press and the University Library have been most generous with donations of books and periodicals, and we are once again indebted to Miss O'Hagan of the Fryer Library for her advice on rare books and to University lecturers for help in their particular subjects. We are deeply appreciative of the work of the University Media and Information Services which has at all times, and particularly at the time of the Fair, been responsible for excellent publicity.

To Mr Ted Pitt, who once again has spent many hours of work on the cataloguing of rare books, and to Mr Blocksidge, who conducted the auction, we owe special thanks. To our own Alumni Office we are especially grateful for their willing help throughout the year and during the Fair.

Apart from the helpers who work all year round, and who greatly enjoy each other's company, we wish to thank all those, too many to mention by name, who came before and after the Fair to carry boxes and trestles - the College students, both men and women, the Veterinary Science students, and various men and women, many of them retired, all of whom were volunteers.

During the Fair we were especially grateful for the many helpers who worked calculators and cash registers, monitored the stock on tables and manned the trolleys to keep up supplies to the tables.

Planning is already under way for the 1989 Alumni Book Fair. Please continue to send us your

Letters to the editor are welcome but must be relevant to university affairs, and be as brief as possible (preferably 300 words maximum). Letters are published subject to space available, and at the discretion of the editor who reserves the right to edit submitted letters which are longer. Letters should contain the name, signature, address and, if possible, telephone number of the author, even if the name of the author is not to be published.

surplus books. Arrangements for collection, or for taking delivery of these may be made by telephoning the Alumni Office on 377 3834.

Lisbeth Hopkins,
Convener,
Alumni Book Fair Committee

Merit principle

In *University News*, April 22 (Letters, page 4), Dr Payne stated that he was "concerned that the consequences of these (affirmative action) initiatives will be to dilute the principle of merit".

Within the departments of this University I have observed many brilliant women working extremely hard and well, and I make no apologies for the emotion of my words, whilst senior staff positions are stacked with males who are neither interesting, insightful nor diligent.

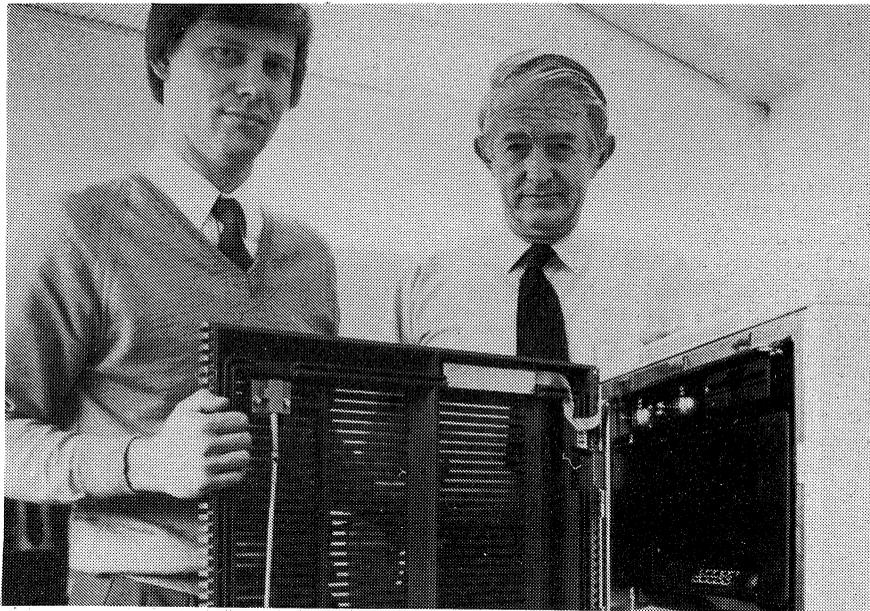
If this is the principle of merit in action, then it is in no danger of dilution.

Louisa Foley,
Third-year Sociology

Six-day sale makes \$85,000 profit



Booklovers in search of a bargain sift through some of the magazines, books and other literary offerings on sale at the fifth bi-ennial Alumni Book Fair. Thousands of people thronged Mayne Hall over the six days of the Fair, and the Rare Book Auction which preceded it was also well attended by local and interstate buyers. The Fair generated profit of \$85,000 - making a total of almost a quarter of a million dollars since the Fairs started in 1979 to raise funds for University projects.



Mr Zornig (left) and Dr Hart with the Pyramid 9810 . . . one of the most advanced systems of its type in an Australian tertiary mathematics department.

Mini computer performs seven million instructions a second

A "SUPERMINI" computer, capable of executing seven million instructions per second, has been installed in the Mathematics Department at the University of Queensland.

The Pyramid 9810 is the first in Australia and one of the most advanced systems of its type in any Australian tertiary mathematics department.

Departmental systems programmer Mr John Zornig said the American-made Pyramid 9810 offered students and staff advantages of speed and flexibility.

With an initial 16 megabytes of memory and one gigabyte of disk storage, the system could support all the department's teaching and research computing needs.

It could be expanded to 128 megabytes of memory, 32 gigabytes of disk storage, and 25 million instructions per second.

"The department traditionally experiences heavy demand with jobs requiring extensive 'number crunching' operations. Until now we have had difficulty meeting these demands through previously existing facilities," Mr Zornig said.

The Pyramid 9810 was capable of supporting more than 100 users simultaneously and had particular advantages for honours and PhD students who often needed to complete research projects in one or two years.

"It gives the students a wider choice of research projects since they can now perform computationally intensive calculations which previously would have been too time-consuming," Mr Zornig said.

"This is important when you consider that mathematical projects often involve a long series of computations with each successive operation dependant on the previous results.

"Jobs which would have taken months before can now be completed within weeks."

Mr Zornig said the system had been in constant use since being installed in early May.

Computationally intensive projects currently making use of the Pyramid are combinatorics, large-scale network optimisation, transport scheduling, number theory, bio-mathematical data analysis and three-dimensional modelling of surface waves.

Department head Dr Vincent Hart said the Pyramid 9810 was the latest purchase in a massive computing growth in the department in recent years.

It was about to become one of the most computerised of any maths department in Australia, he said.

Facilities include a teaching laboratory of conventional terminals, a computer-aided learning laboratory of microcomputers, a research laboratory, and terminals and microcomputers in 28 departmental offices.

Employers on campus for student interviews

EMPLOYERS FROM Australia and overseas will visit the University of Queensland in the coming months to interview students for potential employment.

Representatives of Australian and overseas employers of graduates will be on campus from May 25 to June 5 and from July 27 to August 21 to interview students about to graduate and seek employment later in 1987 and in 1988.

The Careers and Appointments officer, Ms Marion Whitaker, said most employers would be present for only a few days and therefore numbers of interviews were limited.

Employers' recruitment procedures began well before the completion of final examinations, she said.

In addition to placement, the employer visits program also aimed to provide students with detailed and accurate knowledge of opportunities for graduates.

"It is particularly convenient for students to be able to have interviews with a number of employers from most states without leaving the campus," Ms Whitaker said.

"The difficulties and expense associated with interstate travel for interviews are avoided."

Interviews are arranged by appointment with the employers.

This can be done by visiting the Counselling, Careers and Accommodation Services in the Relaxation Block of the Student Union Complex.

A regularly updated program of interviews will be displayed on the main noticeboard at the front of the building.

Students can then select their preferences for interviews from within the program and arrange appointments with the receptionist.

Ms Whitaker said some preparation for interviews was advisable.

Careers and Appointments staff could advise on interview skills and the preparation of resumes, arrange viewings of relevant videotapes and provide a special form to help students summarise details of their educational experience.

Prior knowledge of the organisation also could enhance the value of the interview, she said, and specific information on individual organisations was available from the careers reference library.

Campus echoes to the chatter of German

A CONSTANT chatter of German was heard around the University of Queensland on May 11 and 16 when 1550 high school students tested their skills in the annual Goethe Society verse-speaking competition.

Corridors and outdoor areas were crowded and 20 rooms in use as students practised and presented their rehearsed sections of German poetry.

About 120 students assembled every 15 minutes in the University's Mayne Hall.

The number is a record for the popular competition and 239 more than last year's entry. Students from 57 high schools in towns such as Gympie, Nambour, Toowoomba and the Gold Coast attended.

Twenty panels of German Department staff and students judged the competition which raises funds for the Australian-German student ex-

change program. Each student pays 80 cents entry fee.

Organiser Mr Malcolm McInnes said the record attendance highlighted the enthusiasm for the German language among students and teachers in Queensland schools.

While the competition kept staff "on their toes", it was a valuable and enjoyable experience for teachers and students, he said.

"Teachers must be doing an excellent job for so many students to give up their free time to travel to Brisbane for the competition. It's a boost to teacher morale and also helps improve students' knowledge of German language and poetry.

"The fact that teachers are so involved shows that principals are aware of the value of languages in a balanced education," Mr McInnes said.

Prizes were donated by the Consul-General of the Federal Republic of Germany.



These year nine and 10 students from James Nash High School in Gympie combined lessons with lunch before taking their turn in the Goethe Society verse-speaking competition. They were among 60 students from James Nash who travelled to Brisbane to participate in the competition.

Report says language learning helps trade

ABORIGINAL and Torres Strait Islander languages are an "irreplaceable" part of Australia's heritage and should be taught widely to Australian students, according to a Federal Government report.

The National Policy on Languages also recommended that students study Asian languages "as a first step to improving our understanding of the region".

Federal Education Minister Senator Ryan said that, while the report emphasised the proper teaching and learning of English, it encouraged the study of other languages in the interests of the nation's cultural and economic development.

"Language learning in Australia is very closely related to the success of our economic and trade efforts," Senator Ryan said.

Background in ballet



Miss Vass: back to ballet in a different role.

MISS NICOLE VASS has danced to a different drum since she decided to swap a contract with the Australian Ballet Company for a place in the University of Queensland's Physiotherapy Department.

She graduated top of her class at the 8 p.m. ceremony, having won the Aura L. Foster prize and shared the Margaret Nicol Memorial prize with Mr Peter Crome.

Miss Vass, 25, began ballet lessons at six years old, finished Year 10 and entered the Australian Ballet School at 15, and joined the Australian Ballet Company's corps de ballet at 17.

She spent several years with the company and six months with the Basler Ballet in Switzerland before deciding to study Year 12 as a mature age student and qualify for University entry.

Now she dances only for pleasure and fitness, having supported herself for the past four years by working as an aerobics instructor.

Armed from both sides with an understanding of ballet injuries, she hopes to carve a new career in the midst of the old as a specialist in ballet physiotherapy.

University medallists

THIRTY-FIVE of the University of Queensland's top students for 1986, including Mr Michael Martin who achieved grades of 7 (the highest available) in every subject in his four-year science course, received University medals at the two graduation ceremonies on Tuesday, May 5.

Other medallists were: Marie Bogoyevitch, Deborah Brown, Scott Campbell, Claudio Capelli, Lillian Carswell, Trudy Carswell, Rosemary Chalk, John Chia, Neil Crellin, Allison Crook, Jean Dalton, Philip Dalton, Joachim Dietrich, William Fitzgerald, Jonathan Fulcher, Stephen Gray, Elizabeth Gillam, Diane Harwood, Diane Hawes, Ann Hill, Angela Irwin, Annabel Lahz, Anthony Lang, David Macfarlane, David McMillan, Stephen Mego, Cameron Patrick, Christopher Russell, Cecily Searle, Paul Steffens, Daniel Thomas, Warren Traves, Darren Van Twest and Morgan Windsor.

Users must contribute to costs of education says judge

THERE HAD BEEN something of a knee-jerk reaction to the imposition of the \$250 higher education administration fee, Federal Court judge Mr Justice J.E.J. Spender told graduates at the 6 p.m. ceremony.

One could understand opposition based on the fear that opportunity for tertiary education might become simply a function of the depth of one's pocket, he said.

But the simple fact was, education was not free. Somebody had to pay for it.

"It seems to me that there is nothing philosophically objectionable in a requirement that a student contribute something to his or her education, being an amount that does not in any realistic way constitute a

true barrier to entry or to continuity of higher education," Justice Spender said.

There seemed to be anomalies in that the fee was unevenly imposed and was having a disproportionate effect on part-time students, he said.

But there was something slightly offensive in the strident complaints about it when large sections of the community were facing serious economic stringencies.

"The imposition of the fee has permitted an expansion of higher education places," Justice Spender said.

"A person seeking to enjoy the fruits of higher education cannot expect to enjoy those fruits at no cost to himself, so that the entire burden of the financial cost of providing

Justice Spender: \$250 fee permits education expansion



higher education should be borne by others."

Justice Spender also said Queenslanders were getting less than their due since there were fewer tertiary places in Queensland than in other States and the extent of funding per place was less.

"The number of students not receiving an offer of a place in a college or university in 1986, who were in the top 60 percent of those completing Year 12, totalled 2015 in Queensland compared with 1348 in all other States put together," he said.

"Justice demands that the present imbalance be corrected.

"All Australians should enjoy true equality of opportunity in education. It is their due."

The situation threatened to get worse, Justice Spender said, and could only be remedied by a radical reassessment of economic priorities.

"The education slice of the cake has simply to get bigger," he said, "and that must be at the expense of other slices."

Second career for Cameron

RUGBY UNION CHAMPION Mr Cameron Lillicrap was out of the game and in the hands of his own profession when he graduated bachelor of physiotherapy at the 8 p.m. ceremony.

Mr Lillicrap, 24, was having physiotherapy himself for a neck injury which kept him out of the recent AGC South Pacific Championship match at Ballymore in Brisbane.

The injury has since mended and he has been included in the 26-member World Cup squad scheduled to play in Australia and New Zealand over the next two months.

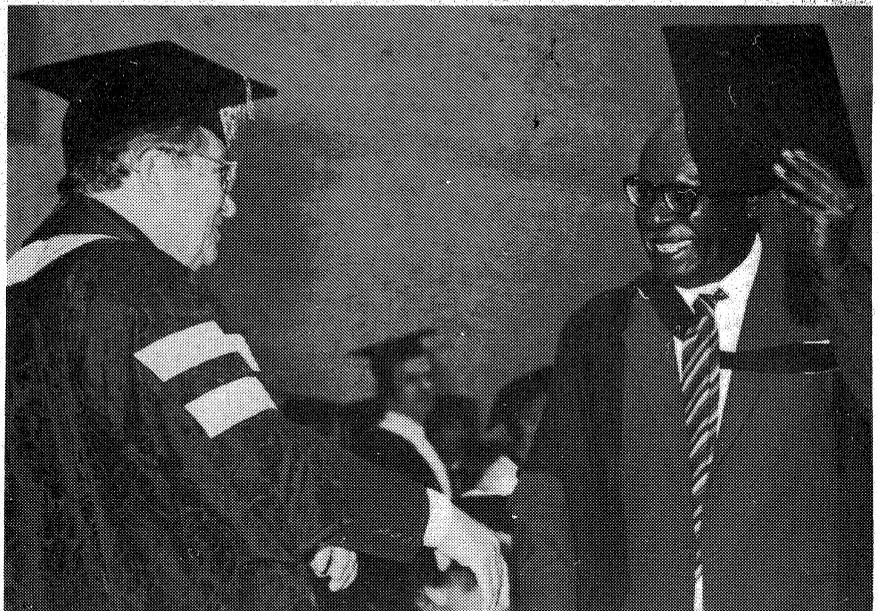
Then Mr Lillicrap will be looking for a physiotherapist's job, preferably in a hospital to get as much experience as possible before specialising in sports injuries.

Injuries and physiotherapy were facts of life for footballers, he said. And he hoped to continue his involvement in the game by treating others once his own career as a player is past.

Mr Lillicrap was born in Brisbane and educated at Brisbane Grammar School, where he played for the Australian Schoolboys, unbeaten in its tour of the United Kingdom in 1981.

He was awarded a full University of Queensland blue for Rugby Union in 1984, and since then has played for Queensland and Australia, including tours of the United Kingdom and the eastern provinces of Fiji.

Mr Lillicrap: mixing football and physiotherapy.



University of Queensland Chancellor Sir James Foots congratulates Mr George Passi on becoming the first Torres Strait Islander to achieve a Master of Social Planning and Development degree.

THE value of computers in making use of land-related information has been highlighted in a joint University of Queensland and State Government project to map North Queensland Crown land.

Researchers have been given the chance to compare traditional methods with computerised methods to build up a database of land information.

They used manual methods, such as hand drawn maps, and the latest computer technology, including computer graphics.

Although the manual methods used were satisfactory, retrieving information was cumbersome and the final maps went only part way towards satisfying needs.

With manual methods it was not possible to integrate computerised information, such as Landsat satellite information, with non-computerised information, such as hand-drawn maps.

Crown land project shows value of computer mapping

The researchers said computerised land information systems could greatly assist in analysing information to produce alternative land use proposals, to assist Government to make planning decisions about use of Crown land.

After discussions between researchers from the University's Geographical Sciences Department, the State Department of Mapping and Surveying, and the Department of Lands, a pilot project was undertaken to assess the value of computers in Land Information Systems (LIS).

This used the Computervision computer graphics system located at

the Australian Key Centre in Land Information Studies at the University's St Lucia campus.

The pilot project was based on Crown lands in the Babinda area, south of Cairns.

The Babinda pilot, recently completed, was "very successful", according to Mr Rod Little, from the University's Department of Geographical Sciences.

"Currently much land-related information, such as the location of forestry and national parks, scenic reserves, roads, or special leases, mining leases, pastoral holdings, and other administrative boundaries are shown on a variety of maps at differing scales in State and Federal Government departments," he said.

"One of the advantages of the computerised system is that the information can be recalled quickly and up-to-date hard copy maps which combine different layers of information, on the one scale, can be plotted," Mr Little said.

The computer-based techniques also allowed quick response in updating much of the information held in the data base, at low cost compared with traditional methods.

The Babinda pilot is being extended to a computerised study of Crown land around the Cairns area (excluding Cairns city) in the Mulgrave and Douglas shires.

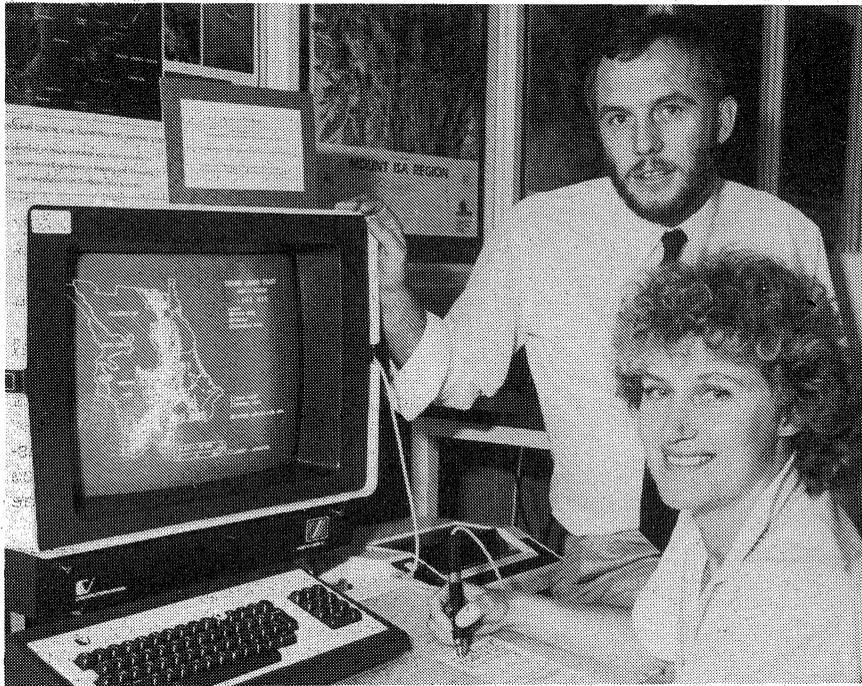
The study, known as the Crown Lands Project, will establish a computerised data base of land-related information covering Crown land in a large portion of North Queensland.

The project has been funded by the State Departments of Lands and Mapping and Surveying, and the Australian Key Centre in Land Information Systems, which involves the University of Queensland, Queensland Institute of Technology, and the Department of Mapping and Surveying.

Crown Land is owned by and administered by the State Government, which leases it to companies and individuals.

According to the 1986 Queensland Year Book, about 72 per cent of Queensland's 1.7 million square kilometres is held under Crown leases, such as pastoral holdings and grazing leases.

Most Crown land is located west of the Great Dividing Range, or near the Gulf of Carpentaria and in Cape York Peninsula.



Mr Little and Lands Department planning officer Ms Olga Sharman with computer graphics being used in the Crown lands project.

ANZAAS, Bicentennial conference details

THE 57th ANZAAS congress will be held at James Cook University of North Queensland from August 24 to 28 this year under the theme *Science and Life in the Tropics*.

Copies of the program and other conference details are available from Media and Information Services, Level 2, J.D. Story Building, telephone 377 3367.

Details are also available on the Australian Academy of the Humanities conference, Terra Australis to

Australia, from August 14 to 26, 1988.

The conference, planned to commemorate Australia's Bicentenary, will trace the discovery and settlement of Australia by the Aborigines, the later exploration and settlement by Europeans, and the nature of the society which has evolved from this background.

Pre-registration discounts for the Terra Australis to Australia conference close June 30, 1987.

U.Q. survey shows one in three children suffer from asthma

THE PREVALENCE of childhood asthma could be increasing in Queensland, according to a survey by University of Queensland researchers.

The survey found one in three children had experienced at least one asthma attack or wheezy breathing, while a similar survey in 1981 showed the ratio as one in four.

Associate Professor Charles Mitchell of the University's Department of Medicine and fifth-year medical student Ms Lindy Roberts surveyed about 3500 children from nine Queensland primary schools.

They collected detailed histories of the children's respiratory symptoms, and measured lung function in a subset of those taking part in the study.

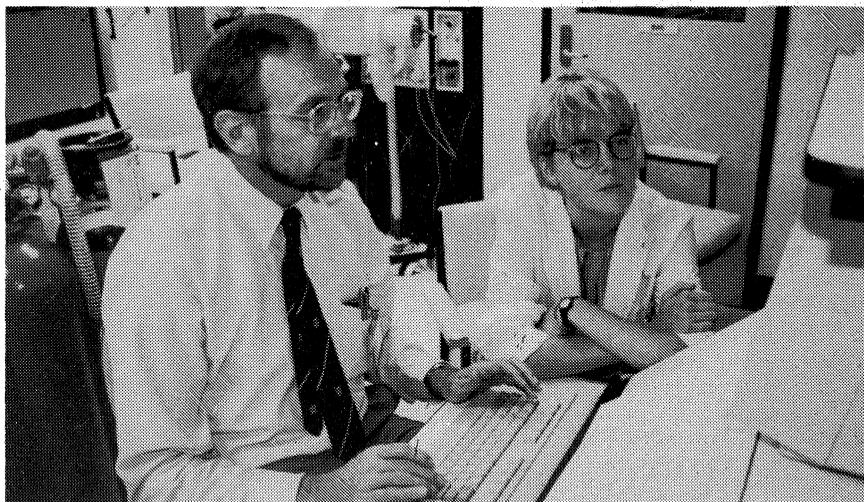
The study was designed to assess the prevalence of lower respiratory tract symptoms such as asthma, wheezy breathing and bronchitis, and investigate differences between regions.

Dr Mitchell and Ms Roberts found some correlation between pollution levels and the prevalence of asthma.

Their survey suggested childhood asthma was more prevalent in industrial areas such as Gladstone and the Brisbane suburb of Murrarie than in non-industrial areas such as Proserpine and the Brisbane suburb of Yeronga.

It also found links between parental cigarette smoking and asthma.

In families where both parents smoked, children seemed to be 50 percent more likely to suffer asthma



Dr Mitchell and Ms Roberts: possible links between pollution, parental smoking and a greater prevalence of asthma in Queensland primary school children.

symptoms than children from families where neither parent smoked.

Dr Mitchell said while there seemed to be regional differences in the incidence of asthma, most regions showed similar proportions of children with mild and severe asthma.

The one exception was Bundaberg, which had a higher proportion of severe asthmatics than other regions covered in the study.

The survey also suggested seasonal cycles for asthma in all regions, he said.

The disease seemed more common in winter, then declined through the spring to a summer low.

The results of the survey pointed to an urgent need for further asthma

research, particularly into specific regional factors such as pollens and fungal spores, Dr Mitchell said.

"The greatest stumbling block to controlling asthma is that we don't yet know what causes it," he said.

"We also need to know why a disease which is common, and readily treated, is in fact poorly treated in the community, so much so that it killed about 800 people in Australia last year.

"An investigation of regional differences in allergens, accomplished with a large scale program of skin allergy tests, would further characterise those areas in Queensland which report a higher incidence of asthma than the rest of the State."

Coolangatta planners adopt student proposals

A 1985 UNIVERSITY of Queensland student project could help change the face of Coolangatta on Queensland's Gold Coast if Mr Pat Zarro's proposals for a multi-million dollar tourist and business development go ahead.

The proposed development includes plans to close off a section of Marine Parade as a pedestrian plaza — an idea put forward by eight regional and town planning students 18 months ago.

The plaza would link the beach with a shopping and entertainment complex, allowing pedestrians unrestricted access to beach, shops and entertainment areas.

The idea was part of a redevelopment plan for Coolangatta, commis-

sioned by the Coolangatta-Kirra Chamber of Commerce and completed as part of the eight students' coursework late in 1985.

The Gold Coast City Council is now reviewing plans for the Zarro development.

Other proposals in the students' plan could also figure in Coolangatta's future development, according to lecturer in regional and town planning Dr Ron Brown, who supervised the student project.

Dr Brown said the Gold Coast City Council had commissioned a private consultant to prepare a development control plan (DCP) for the area, using the students' findings to solve problems such as traffic, parking and zoning for high rise.

Another spin-off from the project was that the Gold Coast City Council (which contributed to the funding of the Coolangatta study) had given the University's Regional and Town Planning Department \$5000 to complete a similar study of Surfers' Paradise.

This would be completed by post-graduate students later this year, under Dr Brown's direction.

"The Coolangatta planning study was one of the most challenging projects our students have ever attempted," Dr Brown said.

"The fact that many of their proposals seem very likely to be implemented within two years, and the offer of another \$5000 to carry out a planning study for Surfers Paradise, shows the Council supports the work we did."

Musician bids farewell with premiere performance

DR GORDON SPEARRITT, associate professor in the University of Queensland's Music Department, will direct the first Brisbane performance of the complete version of Monteverdi's *Vespers* in St John's Cathedral on Saturday, May 30.

The performance marks Dr Spearritt's retirement after 30 years with the Department.

Two choirs and six soloists will combine with orchestra, organ, harpsichord and cello to present Jurgen Jurgens' modern edition of Claudio Monteverdi's music, composed in 1610.

The performance begins at 8 p.m. and admission (\$12 adults, \$9 concession) is by program, available in advance from the Music Department (telephone 377 2014) or at the door.

Dr Spearritt said *Vespers* combined styles from the Renaissance and Baroque eras, and represented the pinnacle of Monteverdi's achievement in the field of sacred music.

The large forces required to perform the work, and the variety of instrumental colour, probably constituted the main reasons for its appeal to listeners in the twentieth century, he said.

Dr Spearritt said the work undoubtedly belonged to an ecclesiastical setting rather than a modern concert hall, and the University's

Music Department was grateful to the Dean of Brisbane, the Reverend Arthur Grimshaw, for permission to perform in St John's Cathedral.

"When composing *Vespers*, Monteverdi was almost certainly influenced by the architectural qualities and Byzantine splendour of St Mark's in Venice," he said.

"St John's Cathedral is neo-Gothic rather than Byzantine, but nevertheless affords the listener a superb visual environment, entirely in keeping with the magnificence of the music."

Born in Bundaberg in 1925, Dr Spearritt trained as a teacher before serving in the Royal Australian Air Force from 1943-45 as a navigator.

He then completed a bachelor of music course at Melbourne University before moving back to Brisbane in 1950 to set up a private teaching practice in piano and theory of music.

He also began a long association with the University of Queensland by enrolling for a bachelor of arts degree and joining the Queensland University Musical Society (QUMS).

Later, as a University staff member, he became deputy director of QUMS, and is now a Patron of the Society which, with the University Choir, will provide the double chorus for his farewell performance of *Vespers*.

In 1952, Dr Spearritt became an examiner with the Australian Music Examinations Board (then adminis-

tered by the University) and founded the University Madrigal Singers — a group of about 24 singers specialising in unaccompanied madrigals, motets and other short pieces.

He conducted this group in nearly 60 radio broadcasts for the Australian Broadcasting Commission over the next 20 years.

Dr Spearritt joined the University's Music Department as a junior lecturer in 1957. He became a lecturer in 1958 and an associate professor in 1972.

He was dean of the Music Faculty from 1974 to 1975 and from 1976 to 1978, and was department head from 1980 to 1985.

Dr Spearritt's research interests include the music of Papua New Guinea, in particular the instrumental music of the Iatmul People of the Middle Sepik River.

He was a member of the Musica Viva Committee (Queensland) for 25 years (including a four-year term as president) and a member of the Queensland Conservatorium Advisory Council for 22 years.

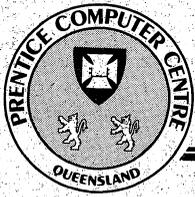
He has been national president of the Musicological Society of Australia and convenor, and later chairman, of the Queensland branch of that Society when it was formed in 1978.

Dr Spearritt has also served as national vice-president of the Australian Society for Music Education, and was awarded an honorary fellowship from the Queensland Conservatorium of Music in 1982.



Dr Spearritt rehearses with the University Choir for the first Brisbane performance of Monteverdi's "Vespers", involving two choirs, six soloists, orchestra, organ, harpsichord and cello.

Prentice Computer Centre



25TH ANNIVERSARY FEATURE

1962 — 1987



Prominent figures in the development of the Prentice Computer Centre — (from left) Professor S.A. Prentice, current Director Mr Alan Coulter, Professor Gordon Rose and Mr Richard Kelly in one of the Centre's two computer rooms.

AS THE Prentice Computer Centre celebrates its 25th anniversary it looks back on an era which has seen exciting and revolutionary changes in computer technology.

In 1962 the University made history when it acquired the first large-scale computer in Queensland — a General Electric GE225, described by local newspapers as "an electronic computing brain", valued at \$200,000.

But the "electronic brain", which occupied the best part of a room in the Department of Electrical Engineering, had less memory than one of today's most basic personal computers.

Today the Prentice Computer Centre is powered by four main-frame computers valued at more than \$6 million. These include the sophisticated IBM 3083 and Digital Equipment Corporation's VAX 8650, which with two other central computers and a specialised Computervision CAD/CAM system provide a combined computing

Dramatic era of change in computer technology

power thousands of times higher than that of the original GE225.

From just a handful of users in 1962, the centre has expanded to meet the needs of 4500 users in 160 departments and organisations from the University of Queensland, Griffith University, other educational institutions and State and Federal Government Departments.

These days the Centre provides interactive and batch computing services and assists in teaching, research and administrative work throughout the universities. Services include specialised programming, engineering development, data preparation, network facilities including electronic mail, typesetting and printing, applications packages, training and advisory services and personal and mini computer support.

From its humble beginnings, the Prentice Computer Centre has come a long way. To review its development we invited Emeritus Professor S.A. Prentice, Foundation Professor of Electrical Engineering, and also the four successive directors of the Centre to recall their experiences.

Professor S.A. Prentice:

"The first proposal to have a University Computer Centre was made in April 1957 after my return from study leave overseas in 1956," Professor Prentice said.

"I had seen many universities and industrial organisations with digital computers and was impressed in particular by their application to engineering research.

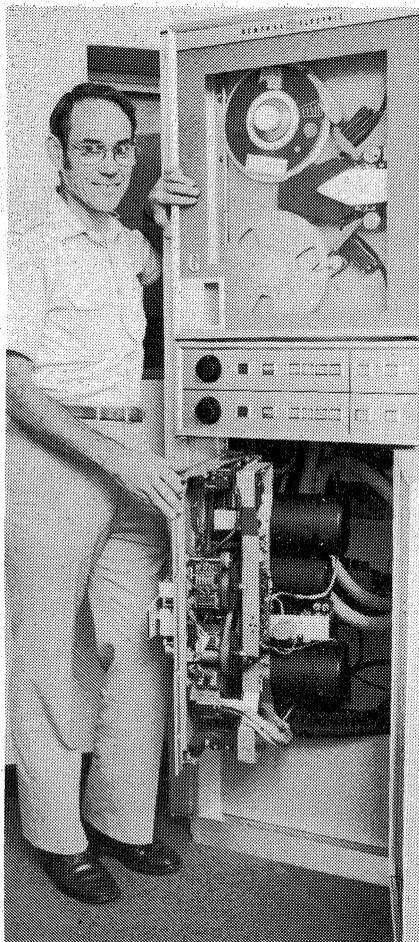
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"I was convinced that a digital computer was an essential requirement to assist with developments in science and technology, but it was clear that even a small facility was beyond the resources of this University unless a co-operative scheme providing for a group of departments was devised.

"In October 1958 there began a series of meetings which explored the ways and means of meeting University needs in this field. At this stage a very comprehensive survey of University needs in data processing and computing was carried out and this provided ample evidence that there was a case for more adequate facilities."

24 yrs on the job with PCC



Prentice Computer Centre's longest serving employee Mr Graham Jerrard with the tape drive for the GE225 — the first computer at the University of Queensland.

1962—1987 a dramatic era of change

"It was finally decided to seek outside finance for a computer from government departments, electricity authorities and private industry.

"In brief this meant raising capital to set up a computer facility by the advance sale of computer time. When enough money was found, tenders were called and the GE225 was purchased. Accommodation was provided by extending the basement of Hawken Building.

"The Centre came into regular operation in June 1962 and on August 1 was officially opened by Sir Douglas Fraser, then State Public Service Commissioner who had given invaluable help during the negotiations with State Government departments.

"Thus were taken the first steps in a venture which has developed far beyond the predictions of 30 years ago."

Dr Don Overheu, 1962-1964:

Dr Overheu recalled further early developments during his term as the Centre's first Director.

"I arrived in 1962 to see a half completed building and no idea where I would sit. Hugh Webster provided me with some temporary space in Physics and, by the skin of our teeth, we moved to the Centre in the basement of Engineering just before term started.

"One looks back with amazement at what we had. A machine of 20kb that took up the goodly part of a reasonably sized room. Yet it was a brave venture in days when computers were still a novelty and academics regarded them with suspicion.

"A fire in the air conditioning duct nearly lost the Centre for us and this certainly would have been the case if it had not been for the efforts of Bill Robson, the laboratory manager of Electrical Engineering.

"Eventually a fast printer and tape drives were added to the system giving it much more effectiveness. It is truly surprising how much valuable work was done, such as the heuristic program for laying out transmission lines, the road contouring programs and the acceptance by Queensland courts of calculations of timber cutting dues.

"The Centre, in conjunction with the Mathematics Department, was also responsible for introducing the first Diploma in Automatic Computing at the University, mo-

delled on the one at Sydney University.

"I shall always be glad to have been associated with this venture which has now grown into one of the major university computer centres in Australia."

Mr Richard Kelly, 1965-1968:

The next few years were years of intense activity, according to Mr Kelly, Dr Overheu's successor.

"The availability of a 'modern' digital computer had been well received by both the University and the (mainly scientific/engineering) community. The small professional staff was stretched to the limit, writing new software, consulting with clients, conducting programming courses, introducing new academic offerings and delivering lectures to professional and learned societies.

"During the period 1961-68, over 2300 people had attended programming courses, conducted by the Centre. An average of over 2000 hours per year was devoted to consulting with and assisting clients.

"In 1968 a new postgraduate Diploma in Information Processing was introduced under the aegis of the Faculty of Commerce and Economics.

"A 70-80 hour working week was not uncommon and the success of the Computer Centre during this phase was undoubtedly due to the efforts of such dedicated individuals as Jim Sokoll, Ian Oliver, Graham Jerrard, John Jauncey and many others.

"It became obvious during 1966 that additional computing capacity would soon be required, so Professor Prentice again unleashed his entrepreneurial skills. A grant of \$160,000 from the Australian Universities Commission and substantial financial backing from the then Commissioner for Main Roads, Mr Charles Barton, were combined with the substantial profits accruing from the operation of GE225.

"Thus the University was able to leap into the then new era of 'time-sharing' with the acquisition of a DEC PDP10 computer system for \$670,000, providing a considerable lift in computing capability and convenience of use.

"Those years of almost frantic growth and expansion are probably best remembered for the camaraderie and enthusiasm between Centre staff and clients.

• Continued page 15

THE NEXT 25 years of computing development will be characterised by no less change than the past 25 years.

Systems providers and users have not yet taken advantage of the past 10 years of intensive research and development into computing hardware and software.

World-wide research into computing and related technologies continues to expand, and at a faster rate.

The close association of computing and communications is now well accepted. Integrated Services Digital Networks (ISDN), offering facilities for voice, video and data and global communications networks, will be usual in the next 10 years.

Very specialised computing services will be associated with those networks and be capable of being accessed by more than a privileged few. The range of computer based applications will expand in response to new technologies.

Apart from changes in technology, the Prentice Computer Centre as a central resource unit must also respond to changes in demands and organisational structure of the University community which it serves.

Universities are undergoing structural and management

All set for an age of supercomputers

changes with greater devolution of authority. The more that computing is embedded in the teaching, research and administrative functions of nearly autonomous units, the more there will be a desire for computing to be under the control of such units.

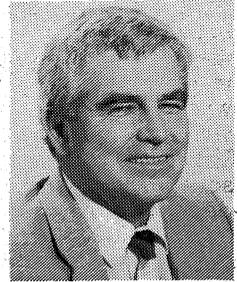
The central computing units at universities must in the future place a greater emphasis on support through development of relevant infrastructures of networks, expertise, standards and specialised services.

The philosophies and standards of Open Systems Interconnect (OSI) will have a major impact on future developments. All computer hosts and network services should be equally accessible by all users.

By far the major challenge for central computing support units will be the development and the retention of people expertise.

We must help our existing staff meet the fast rate of change in technology through professional development programs. After a period as a professional novice, there needs to be an industry competi-

By Alan Coulter:
Director,
Prentice
Computer
Centre



tive contract and remuneration package that will enable centres of computing expertise to retain the best staff and buy in expertise that they do not have.

There is a need for access to supercomputer facilities. The availability of large computers at CSIRO in Canberra has been shown over many years not to be the best solution for universities.

With the development of effective networks, it would be possible to develop a co-operative arrangement to establish a supercomputer in Queensland to serve the scientific needs of Queensland industry, government and tertiary institutions.

And so after 25 years, there is again a need for a Syd Prentice to develop a co-operative arrangement to enable Queensland to enter the supercomputer era.

• Continued from page 14

"The client's room became a meeting place for advice to be given and received, for the exchange of ideas, for the meeting of minds.

"Regrettably, timesharing has distanced the users from the Centre and from each other but that may be the price of 'progress'."

Professor Gordon Rose, 1969-1972:

Professor Rose guided the Centre into the 1970s as its third Director.

"On January 1, 1969, the Department of Computer Science was established and administrative responsibility for the Computer Centre was transferred from Electrical Engineering to the new department," he said.

"The GE225 computer had been operating extremely successfully and had accumulated \$760,000 in revenue, 80 percent of which was from external clients for less than one third of the consumed computing units.

"During the first year of opera-

1962—1987 a dramatic era of change

tion of the Department of Computer Science the service and the academic functions were formally separated. A largely autonomous Computer Centre became the service unit and the Department confined its activities to teaching and research.

"Life in the Centre was never static. 'Routine' was a misnomer. Some of the major problems of the 1969-72 period were: a changing pattern of usage from batch to remote terminals, using a system which was to an extent unproven; a changing pattern of revenue, from largely external to largely internal as outside bodies purchased their own equipment and commercial bureau commenced operation.

"It was no longer possible to maintain high differential charging rates. In brief, the period of external revenue subsidising internal computing was over.

"There was no AUC grant for the triennium of 1970-72. This was a major disappointment as funds

were essential to develop the PDP10 to its full potential.

"Accommodation for both Centre and Department was totally inadequate, a situation which persisted for years to follow.

"The early 70s were also years of marked unrest on the campus, primarily arising from the Vietnam War and an awareness that computers implied unemployment and military associations. Security had become a new issue and external glazing was replaced by brickwork.

"Personally I found the 1969-72 period extremely demanding. I would like to record my appreciation for the guidance given by Professor Prentice and the advice and dedication of all staff. I also acknowledge the considerable contribution during this period of Professor Ronald Gates, Mr Jim Ritchie and Professor Don Nicklin and to all who served on the Centre executive."

• Continued page 16

PCC keeps closer eye on client satisfaction

IF YOU have ever had problems using the Prentice Computer Centre's facilities and services, or if you have any ideas for new services, Mr Geoffrey Dengate is the man to see.

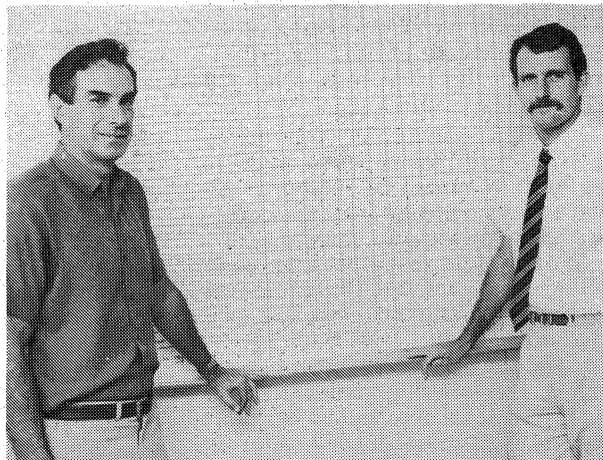
Mr Dengate, a systems analyst with extensive experience at Prentice, has been assigned as PCC's troubleshooter to improve communications between the Centre and its clients and to explore current and future needs of departments.

When you have a range of systems and services as large as PCC, communications can become stretched, according to Mr Dengate. So, this year he is visiting every department in the University to collect feedback on problems with existing services and to solicit ideas for new ones.

"This is your chance to tell PCC your problems," he said. He would like to hear about any frustrations you have with any service — persistent technical problems, maintenance troubles, delays in deliveries — anything that the HELP Desk cannot fix in fact.

Mr Dengate is aiming to devel-

Prentice Computer Centre deputy director Mr John Noad (left) and Mr Dengate review the early results of his discussions with departments on their future service needs.



op a strategic plan for the next two years to provide additional services. He said this was particularly important because of the virtual explosion in the number of personal computers on campus — from nil 10 years ago, to approximately 1000 today.

"Ten years ago the majority of computer power on campus was in our basement. Now the majority is distributed through departments," he said. "We need to find out what new computing services are needed to complement teaching, research and administration. Computing is changing rapidly and we have to change too."

From the 35 departments he has visited so far he has found the biggest unsatisfied need is for personal computer support services — how and where to buy PCs, how to use them and general advice about hardware and software products.

There seems to be a need also for better link-up between computers and for better communication generally. Mr Dengate is finding that many people simply don't know how to use the Centre or how it can help them.

He is happy to talk to any department and can be contacted on 377 3944.

• Continued from page 15

Mr Alan Coulter, 1972-present:

The current Director, Mr Coulter, said the next 15 years from 1973 to 1987 were typified by rapid growth in the demand for computing and the variety of services offered.

"During this period the Centre responded to major changes in technology and to the pervasiveness of computing applications across the total academic community.

"The agreement with Griffith University in 1974 for the Computer Centre to provide central computing support for that university was the first co-operative resource sharing venture in computing by any Australian university and, indeed, was the first of a number of co-operative projects involving costly equipment between the two universities.

"In 1975 the University of Queensland Senate recognised the importance of the contribution of Professor Prentice by renaming the Centre the Prentice Computer Centre.

1962—1987 a dramatic era of change

"Although the Centre operates significantly more central computers of greater power than it did 15 years ago, the major change has been the development of the Centre from a supplier of computer time to a supplier of computing services.

"The association of computers and communications provides substantial user benefits. The number of remote devices having access to central computer systems has grown from around 30 in 1972 to 170 in 1979 and to well over 1000 currently.

"The Centre installed the first operational ETHERNET (providing transmission speed of 10 million bits per second) in Australia between PDP11 and VAX systems in 1982. The ETHERNET network is being extended throughout the campus with optic fibre technology replacing coaxial cable.

"In 1984 the communications link between Griffith University and the Centre was upgraded to two million bits/second. Gateways

with external research networks have been established commencing with a joint development with CSIRO in 1978.

"The Centre was one of the first to install relational data base technology and computer based typesetting services. Current developments are to improve the mechanisms of access to be more 'user friendly', particularly for personal computer users.

"The total demand for computing services has grown. Computing applications have extended from the traditional areas of engineering and physical science to cover now all the disciplines of the University.

"There is need within the University for a hierarchy of computing resources linked by network services. As in the past, the role of the Prentice Computer Centre will be influenced by new technology and new applications and the challenge will be to be innovative, relevant and cost effective."

Powerful central computer network

THE VAST changes in computer technology in the past decade have brought about a rapid expansion in the facilities of the Prentice Computer Centre.

At its heart now are four main-frame computers, including the state-of-the-art IBM 3083 and VAX 8650. Backing up these are the VAX 11/780 and the older KL10, all under the control of the Central Computing section.

Together the IBM and the VAX 8650 are the most powerful computers in the Centre. The IBM, VAX 11/780 and KL10 are used for teaching and research, while the VAX 8650's primary role is to support the University's administration, although it too is available for some teaching and research.

For more detailed information about each of the systems and which is the best to use, see WHICH SYSTEM? below.

All machines are accessible via the University's network through terminals in each department and personal computers can be hooked up too, via modems and telephone lines.

The Central Computing section is also responsible for maintaining and developing the software used on the main systems — both Digital Equipment and IBM. This includes extensive statistical, text processing, data base and graphics packages.

Software maintenance managers Mr Ian Burgess and Ms Noela Meier are responsible for evaluating new software, as well as ironing out software bugs and solving problems. Major problems are reported to manufacturers.

This section has vast experience, which anyone can tap into, in software uses and problems. For advice contact the HELP Desk (see story page 18).

When it comes to printing, the Centre has a typesetting machine and a range of high quality printers for use with the central computers. These include the sophisticated Compugraphic MCS8400 typesetting machine, accessible from the VAX and KL10 systems, with about 80 fonts available in various type sizes from 5 to 72 point.

Mr Barry Maher is in charge of the typesetting service which produces camera ready copy for a wide range of publications including handbooks, brochures, books, journals and letter heads. Just bring him your manuscripts, either on paper or on disk and he will format them and take it from there. Alternatively users can produce

their own typeset material on the system.

For printing, the Centre offers a laser printer which prints high quality documents from material prepared on the IBM; an electro-erosion printer, also attached to the IBM, which produces camera ready masters; plotters which can be used to produce graphs and charts and a letter quality Facit printer for use with all systems.

In charge of all these facilities is Central Computing Facilities manager, Mr Allan Woodland, a systems analyst with 11 years' experience at Prentice. He heads a staff of operators and programmers who take care of the day-to-day running of the computers.

Operators are on duty, taking care of all the machines, between 8.30 a.m. and 11 p.m. To become a user you have to establish an account at the Centre and be issued with a user identification code. To obtain information telephone 377 2188.

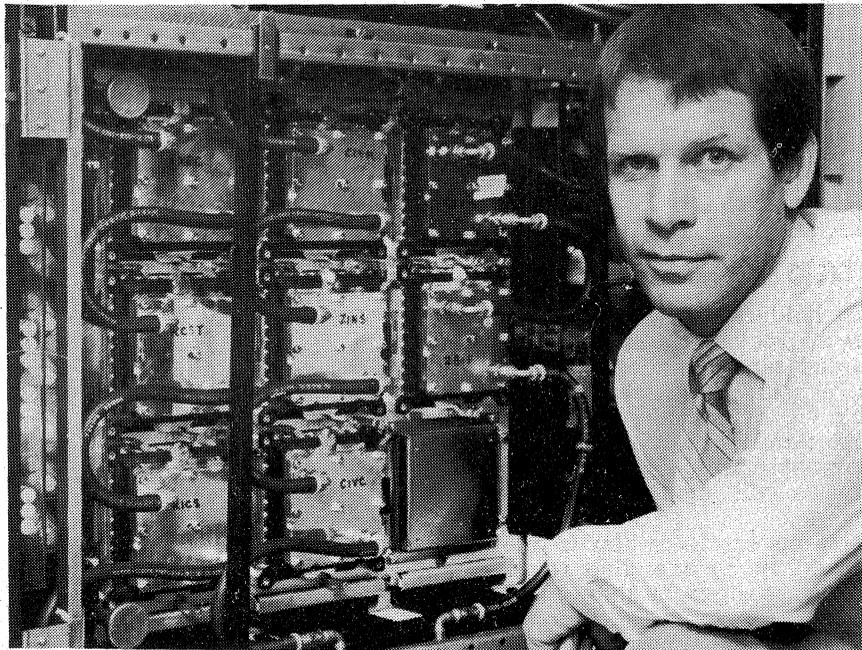
WHICH SYSTEM?

The following is a quick guide for those wondering which system would be most economical and suited to their needs:

IBM 3083 — has the widest range of software packages for teaching and research, including word processors, databases, statistical and mathematical packages. It is best for large research projects, especially big number crunching exercises which involve lots of calculating and computing time because there are ceilings on its charges.

VAX 8650 and 11/780 — the 8650 is mostly used for administration, the 11/780 mostly for teaching and research, although they do not have as many teaching and research packages as the IBM. However, for small research projects or occasional users they are better because they have incremental charges. You pay only for what you use so if the project is small it makes more sense to use one of these systems.

KL10 — it has a limited life span and although still used for teaching and research, users are encouraged to develop new work on the IBM or VAX systems.



Mr Woodland shows the unusual water cooling system for the powerful IBM 3083 mainframe, one of the computers at the heart of the Prentice network.

On-going education gets top priority

WITH THE RAPID changes in technology and new hardware and software appearing almost every week, the Prentice Computer Centre has recognised the need for ongoing computer education.

So, the Centre regularly conducts short courses in the uses of the central mainframe computing systems and PCs. The courses are free for staff, postgraduate students and student kit owners.

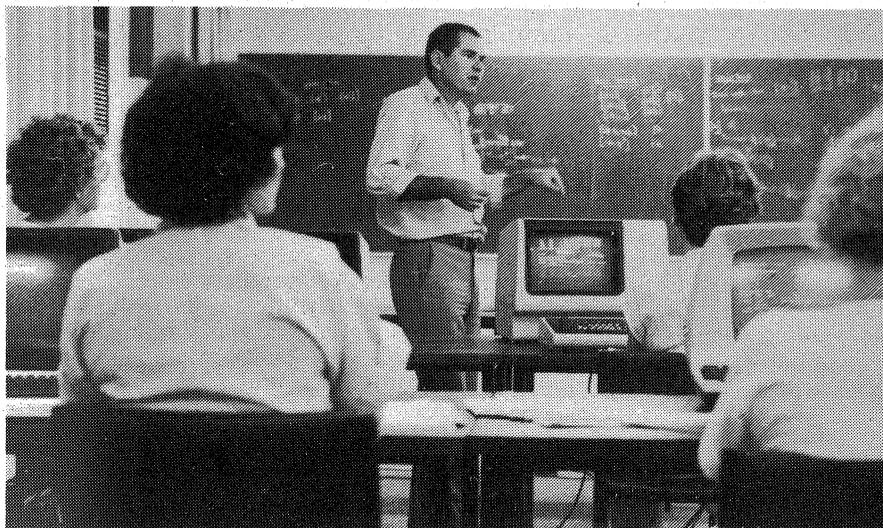
The courses are divided into: (1) introductory courses which teach the basics of using either the mainframes or PCs, including keyboard usage, file management and editing; and (2) specialised courses on various computing applications such as statistical packages, database systems, text processing and graphics packages (for both mainframe and PCs).

In addition there are elementary programming courses in FORTRAN and BASIC languages.

All courses are conducted in the Centre's up-to-date laboratories near the Physics Annexe which have large overhead projection screens, 14 terminals and 10 PCs for hands-on experience.

The courses are taught by education officers Mr Barry Maher and Mr Nick Evans, both former high school teachers with years of experience teaching computing.

Mr Maher, who has been with



Mr Maher takes a computer class in one of the teaching rooms of the Prentice Computer Centre.

the Centre for seven years, believes hands-on experience is essential when learning to use computers and all courses have been structured this way. There are between 80 and 100 courses every year.

Forthcoming ones are printed below. If you have any queries or would like to enrol, telephone 377 3018.

JUNE

(all courses are half days unless otherwise specified)

SPSS-X (VAX/IBM)	June 1-5
Introduction to DBASE III	June 2-4
Introduction to the IBM	June 9-12
SCRIPT	June 9-12
Introduction to SAS	June 15-19
Conversion to the IBM	June 16-18
Conversion to SPSS-X	June 23-24
Further IBM features	June 25-26
Intro. to Datatrive	June 29-July 3
RUNOFF (DSR)	June 29-July 3

JULY

Introduction to BASIC	July 6-10
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General Graphics	July 7-10
Text facilities on the IBM	July 8-9
Intro. to FORTRAN	July 13-17 (full days)
Intro. PCDOS/MSDOS	July 14-16
Intro. DBASE III	July 21-23

Help Desk is a source of good advice

IF YOU ARE having problems using the Centre's systems or have a query about some aspect of its programs or packages, then contact the HELP Desk.

The HELP Desk (telephone 377 3025) operates from 8.30 a.m. to 4.30 p.m. and is designed to provide immediate advice on the use of the central systems as well as more detailed consultations.

After hours, you can make contact by using the electronic mail service, sending your message to CCHELP.

The HELP Desk operator has a terminal and can quickly log in to any system to assist with problems. Minor problems usually can be sorted out fairly quickly. The operator will also provide backup advice on how to use software packages.

Personal visits with specialist consultants can be arranged by appointment. The service is available to staff, postgraduate students and undergraduates who have bought student kits. Other students should take their computing problems to their academic supervisors.

Kits offer cheap computer access

THE CENTRE offers students access to the IBM 3083 via two student kits, providing cheap alternatives to the purchase of personal computers.

The kits, costing \$40 and \$53.50, depending on requirements, provide access during semester to 1.25 megabytes of memory and between 600 and 1100 kilobytes of disk space. They are ideal for preparing papers, theses or for processing research and statistical material. Kits include about \$5 worth of printing (about 60 pages on the laser printer).

Kit holders can use any of the software packages available on the IBM and can have access to facilities 24 hours a day, seven days a week, via terminals in the Centre's public terminal room. Access is also available from PCs or remote terminals via modems on telephone lines.

Students can learn how to operate the kits by attending regular advisory sessions or they can attend formal courses run by the Centre (see above story).

For more information contact the Centre on the ground floor of the Hawken Building.

Contracts boost PCC's external reputation

THE ENGINEERING and Communications section provides a range of services both within the University and elsewhere.

Manager, Mr Graham Rees, heads a team of 12 engineers, programmers and technicians who take care of the installation and maintenance of computers and other equipment at the Centre and provide a computer advice and consultation service for outside organisations.

Engineers from the Centre also undertake, on contract, special projects such as designing printed circuit boards and interfacing personal or micro computers to a wide variety of scientific instruments and other machinery.

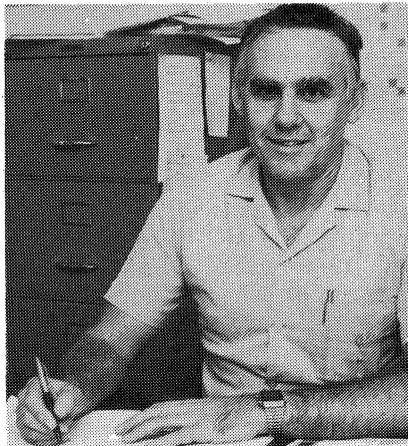
Their biggest success to date has been the designing of a complex, six-layer board for an encryption (data security) system for a Gold Coast technology company, Eracom. With the board, the company has been able to increase the speed of its encryption processor by 50 percent and has hailed it as an outstanding success.

The section also looks after data communications facilities both on and off campus. These include the installation and maintenance of coaxial cables and optical fibre, modems, multiplexers and line drivers, the development of net-

works such as Ethernet, and the development of software for network services.

In 1982 Digital Equipment Corporation presented the Centre with a plaque to commemorate the installation of the first operational Ethernet local area network in Australia. Operating between the PDP-11 and VAX systems on campus, it provides high-speed transmission of data at 10 million bits per second.

The Ethernet network is being extended throughout campus with optical fibre technology replacing coaxial cable.



Mr Rees

Key role in developing SPEARNET

PRENTICE COMPUTER Centre has assumed a leading role in the development of SPEARNET (South Pacific Education and Research Network) which provides rapid communications between Australia, New Zealand and 30 networks in 15 countries including the U.S., Canada, Britain and Europe.

The Centre, with four other universities, has been developing the software for SPEARNET, which has come into operation during the past 12 months.

Through the Overseas Telecommunications System, SPEARNET can be used to transfer files and electronic mail around the world and to gain access to major information networks such as the American Telenet and Tymnet which,

among other things, provide access to the U.S. Library of Congress and Dialog Databases.

Users can also gain access to the Australian Bibliographic Network in the National Library. Access is gained from any terminal simply by dialling a number which connects users directly into the network.

For small documents the network can provide a cheaper method of transfer than ordinary mail and it is being regularly used by libraries and academic departments at eight universities around the country.

Growing at the rate of 30 percent a year, it is expected to revolutionise information gathering and communications in the academic community in the next decade or so.

Specialist team can assist with applications



Ms Barry: advice on projects

IN THE Applications Development section you will find a team of programmers with experience in a wide range of mainframe computers and PCs.

Here you can get free advice on how best to tackle your project, whether it be related to teaching, research or administration. They will advise on appropriate software, undertake preliminary system design work and provide estimates of programming and machine costs for submissions to research funding bodies.

Applications Development programmers are happy to assist you with all aspects of projects including systems analysis, programming, documentation and data entry. Contact the manager, Ms Sarah Barry, for advice.

If you have special needs, not catered for by existing applications, the section does programming on contract — small or large projects — with charges determined by the size of the job.

It's worth noting that the Centre already has a variety of special systems which have been developed so it may be useful to find out first what software is available in the Program Library.

The data preparation service, covering entry and verification of data, is based on an hourly rate. Special expertise exists for entry of text for typesetting and for survey data.

In a recent project, the Applications Development section was chosen by the Australian Development Assistance Bureau to design, program and implement a major student information program for the University of Technology in Lae, Papua New Guinea.

PCs: powerful, convenient, versatile

THE DISTRIBUTED Computing section of the Prentice Computer Centre looks after what is probably one of the fastest growing branches of computer technology today — personal computers.

Already there are about 1000 PCs on campus with the numbers increasing. With rapid updates in technology and new software appearing almost every week, more and more departments are finding the PC a powerful, convenient and versatile tool for both administration and research.

Recognising the growing importance of PCs, the Centre has set up a Personal Computer Support Group (see story this page) to provide advice to the ever-increasing number of users both here and at Griffith University.

Apart from PCs however, Distributed Computing also takes care of sales advice, maintenance and software support for a range of other departmental computers. Manager, Mr A.J. Bird, heads a team of 13 programmers, technicians and engineers who are responsible for maintaining the 50 or so PDP-11 computers and their peripherals in use around campus. They also maintain the large number of terminals used on the central computer systems.

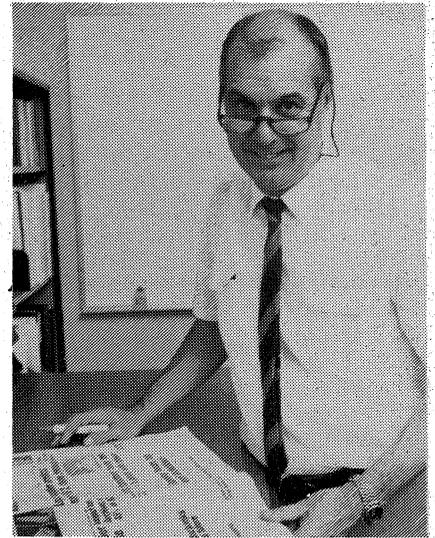
Programmers from the section provide support for the PDP-11s, distributing new versions of soft-

ware and attending to any operating faults that occur.

The section also gives advice to departments wanting to purchase computer systems, peripheral equipment or terminals. It will provide information about the type of equipment available and advise which system will best suit the department's needs.

The Centre negotiates collective purchase contracts for a wide range of computing equipment allowing significant discounts for University users.

Technicians and engineers also carry out evaluations of new hardware and can give expert advice of all aspects of computer systems, as well as ordering and installing equipment.



Mr Bird

Support group for PC users

IF YOU ARE about to become a PC user, you probably have several questions. What PC should you buy? What software will best meet your needs? How much should you expect to pay?

The Personal Computer Support Group was set up to provide advice, sales and maintenance services to the growing community of PC users both at the University of Queensland and Griffith University.

These services are run by Mr Chris Barker, who has years of experience in both PCs and mainframe computers. The PC Support Group has four main functions:

(1) Sales and advice — all IBM PCs and products are available direct through the Support Group to staff and students of tertiary institutions at special discount prices. The Group provides independent advice on purchasing other brands of computers as well and will arrange sales through outside retailers. It also sells software such as Lotus, Data Base III and word processors and hardware add ons.

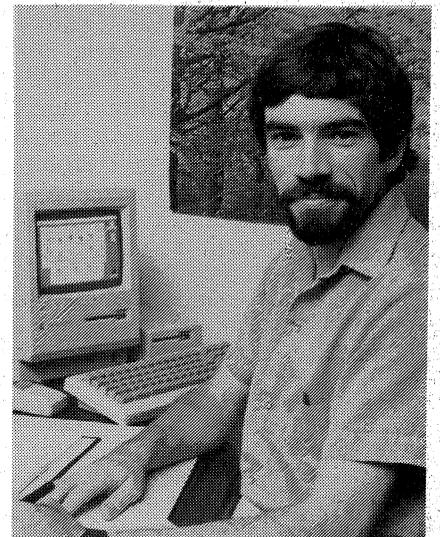
(2) Special services — the Centre provides for PC users specialised printing services, including the LaserWriter, which is a near typeset quality text and graphics printer with very high resolution. The PC Support Group can arrange printing at discounted rates for staff and postgraduate students.

(3) Maintenance and repairs —

the Centre currently can carry out maintenance and repairs for IBM, Apple and Cleveland PCs.

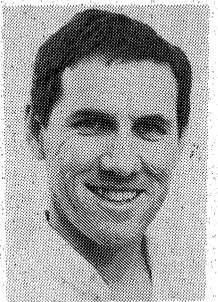
(4) PC hire service — the Centre will hire IBM PCs to departments which may need one for a specific project. For instance, one was recently hired to the Equine Blood Typing Laboratory to process the output of its densitometer. The Centre will also hire out hardware peripherals and enhancers such as hard disks and turbo boards for faster processing.

Mr Barker is happy to talk to anyone about their PC problems. Telephone 377 4233.



Mr Barker

How to settle Prentice accounts



Mr Denis Antonellie

ALL accounts, invoices and equipment orders from the Prentice Computer Centre are handled through its Finance and Administration section. The manager is Mr Denis Antonellie.

If you have any inquiries about invoices or orders you may contact Mr Dal Anderson on 377 3166.

\$35,000 for inner-city transport study

UNIVERSITY of Queensland town planners have begun an extensive study of the future transportation needs of Brisbane's inner-city.

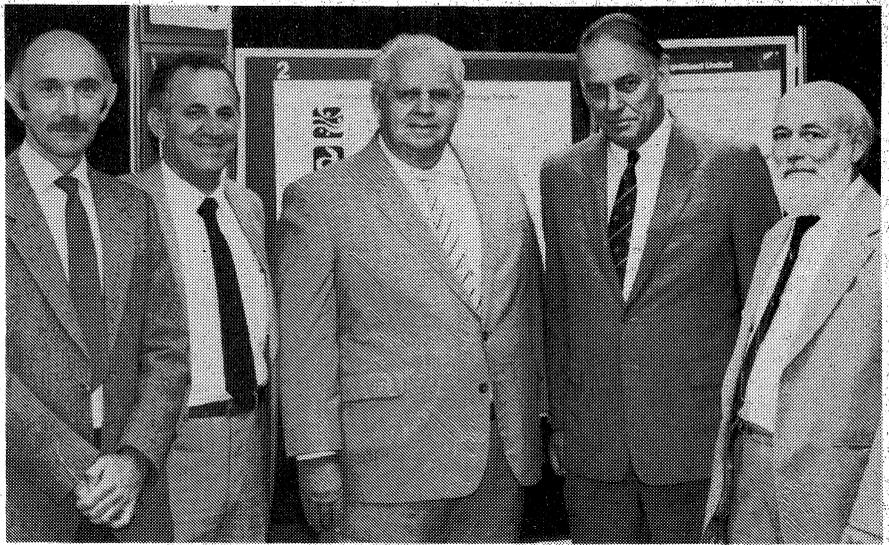
The \$35,000 study, the first of its kind for the city centre, will chart the traffic and pedestrian needs of the central city zone for at least the next 20 years.

The project was negotiated through UniQuest Limited, the University's contract research and marketing company, and will be managed by it.

It is being sponsored by the Brisbane City Council and the State Government Departments of Main Roads, Local Government, Transport and Railways, and will be carried out by co-ordinator Mr Mario Basile and Dr Colin Taylor, Dr Phil Smith and students of the University's Department of Regional and Town Planning.

The project has arisen because of the massive development of Brisbane's inner city in recent years and because no other similar, united study involving these five government bodies has yet been undertaken.

The team's objectives are three



Discussing the inner-city transport study are (from left) Dr Smith, Mr Basile, the Minister for Local Government, Main Roads and Racing Mr Hinze, the Vice-Chancellor Professor Brian Wilson, and Dr Taylor.

fold — to appraise existing transportation in the central city zone; to identify the main shortcomings of the present system, especially in relation to any conflict between pedestrian and vehicle movement; and to recommend long-term solutions to these problems.

This preliminary study could pave the way for some exciting innovations in Brisbane's inner-city traffic scene, according to Mr Basile, who has recently researched such developments in a number of European cities.

"Our main goal is to promote the central city area as a place for people, but that still leaves scope for a great variety of transport alternatives," Mr Basile said.

"We may find it appropriate to recommend something as significant as converting all roads in the city centre to pedestrian malls with access via a monorail or underground railway and a car parking network on the perimeter.

"The key, however, is to make it easier for people to reach the city centre and to increase mobility once they are there. If people are there, the city will develop and thrive."

Brisbane city had enormous potential, but as the central business area continued to develop and attract more people, the need for careful and thorough planning became more critical, Mr Basile said.

"For example, the Queen Street mall has been extremely successful in attracting people to the city centre. But it has also created traffic congestion which is of some concern to planners," he said.

"There could be other planning solutions or alternatives which may not have been considered, but these can only be introduced after thorough research. This is where our study will be of considerable value."

UniQuest project manager Mr Alex Ertan said the contract was an example of the mutual benefits to be gained when skills within the University were applied to meet needs within the community.

In addition to providing a service to the community, the project would benefit the Department of Regional and Town Planning financially and provide valuable first-hand experience for students who would work on the study during second semester, he said.

The team's report will be submitted to the Minister for Local Government in February, 1988.

Profile of civil religion in Australia

A PROFILE of civil religion and its effects on Australian behaviour will be presented at an Australian Studies Centre colloquium at the University of Queensland on Friday, May 29.

Celtic journal

THE CELTIC Council of Australia is seeking contributions for an annual journal to promote Celtic culture in Australia.

The journal, to be published each October with the support of the Celtic Studies Unit of Sydney University, will contain articles by Celtic writers and scholars, items on Australian/Celtic heritage, and a calendar of popular events.

Further details are available from Mr Roger Thomas, 125 Bradfield Road, West Lindfield, New South Wales, 2070.

The colloquium will comprise a reading of several scholarly papers each followed by a discussion on the usefulness of civil religion in interpreting Australian behaviour.

Questions to be addressed include: why was Anzac Day observed as a second Good Friday?; is the National War Memorial a modern sacred cathedral?; are carols by candlelight more than sentimentality?; is the eight-hour day still sacred to family life?; and why the Bible in schools?

Interstate and overseas scholars participating in the colloquium include Professor Richard Crouter, of Carleton College, Minnesota, Professor Michael Hill, of Victoria University, Wellington, and Dr Richard Ely, of the University of Tasmania, Tasmania.

Further details are available from the Australian Studies Centre, telephone 377 2658.

Central exams

Legend to locations

AA Mayne Hall	II Lecture Room 110, Computer Science Building
BB Sports Union Complex (Indoor Sports Pavilion)	JJ Lecture Theatre, B9, Forgan Smith Building
CC Bistro Room — Students Union Building	KK Lecture Room 45, Forgan Smith Building
DD Sir Albert Axon Room (Students Union Building)	LL Lecture Theatre G77, Parnell Building
EE Lecture Rooms 10C/10D, Hawken Building	MM Lecture Theatre G88, Parnell Building
FF Lecture Theatre B18, Hawken Building	NN Lecture Theatre 21, Steele Building
GG Lecture Theatre G13, Hawken Building	OO Lecture Theatre 26, Steele Building
HH Lecture Room 112, Priestley Building	PP Lecture Theatre B1, Goddard Building
	QQ Room 81, Forgan Smith Building

SUBJECT	DATE	SESSION	ACCOM.	SUBJECT	DATE	SESSION	ACCOM.
AG201	19/6	1	PP	BC207	27/6	3	AA
AG203	23/6	3	MM	BC208	22/6	1	QQ
AG206	17/6	3	BB	BC210	22/6	3	LL
AG211	26/6	2	FF	BC211	15/6	4	GG
AG320	16/6	3	MM	BC241	22/6	2	CC
AG325	20/6	2	BB	BC254	22/6	3	AA
AG335	26/6	2	GG	BC302	17/6	4	AA
AG401	15/6	1	FF	BC306	25/6	1	II
AG427	19/6	2	AA	BC309	19/6	4	II
AG430	20/6	2	BB	BC311	15/6	3	II
AG447	16/6	3	AA	BC323	26/6	3	II
				BC341	16/6	3	LL
				BC351	17/6	2	
Theory							
AN105/1	22/6	1	CC				FF
AN109/1	22/6	1	DD				GG
AN110/1	15/6	1	CC				MM
AN201/1	15/6	1	CC				
AN202/1	23/6	1	LL	BT108	16/6	1	II
AN215/1	15/6	1	BB	BT110	25/6	1	
(Gross)							
AN215/2	15/6	3	AA				NN
(Embryology)							OO
AN301/1	17/6	1	KK	BT216	16/6	4	AA
AN308	22/6	1	II	BT218	18/6	3	CC
AN313	25/6	1	QQ	BT221	23/6	1	FF
				BT339	22/6	1	PP
AT231	15/6	3	HH	BT340	17/6	3	CC
AT243	27/6	1	DD				
AT351	15/6	3	HH	CH101	25/6	3	DD
AT363	27/6	1	DD	CH102	19/6	4	FF
AT411	26/6	3	MM	CH103	29/6	3	
							GG
BA100	19/6	1					HH
			(Surnames A-Sp)	CH104	17/6	1	AA
			(St-Z)				KK
							BB
BC101	20/6	1		CH121	20/6	2	MM
			(Surnames A-K)	CH123	19/6	1	
			(L-Z)	CH137	26/6	3	
BC102	29/6	1	GG				CC
BC141	25/6	3	GG	CH145	15/6	3	DD
BC206	18/6	1	LL				CC
							DD
				CH201	16/6	1	AA
				CH207	26/6	1	GG
				CH208	16/6	1	AA
				CH221	20/6	2	GG
				CH222	18/6	3	BB
				CH231	30/6	1	AA
				CH354	24/6	1	II
				CL110	20/6	3	HH
				CL111	17/6	1	GG

COMMENCEMENT TIMES FOR EXAMINATIONS

Session 1 — 8.00 a.m.
 Session 2 — 11.00 a.m.
 Session 3 — 2.10 p.m.
 Session 4 — 5.10 p.m.

THE UNIVERSITY has released the central examinations timetable for the examination period beginning in June.

First Semester lectures end officially on Friday, June 5 and the examination period is from Monday, June 15 to Saturday, July 4. Central Examinations will, however, finish on July 1.

The timetable prepared by the University's Examinations Section is reproduced in full in this issue of *University News*. It covers both Central examinations and a number of Departmental examinations for which the Examinations Section takes responsibility for timetabling.

The Examinations Officer, Mr Neal Byrne, has provided the following information for students:

STUDENT CARDS

All students (other than external students) are required to bring their student cards to the examination room. Any student failing to do so may be refused admittance.

STUDENT HEALTH

A Nursing Sister will be on duty at Student Health Services at all times during the examination period for students requiring medical attention on campus. These facilities are also provided during evening and Saturday examinations.

PARKING

Normal parking arrangements will apply. No relaxation of parking rules is made for examinations.

HANDICAPPED STUDENTS

Students suffering from physical handicaps requiring special arrangements are reminded to contact the Examinations Officer as soon as possible.

SUBJECT	DATE	SESSION	ACCOM.
CL112	15/6	3	II
(Ext)			
CL115	25/6	3	AA
CN110	23/6	1	FF
(Ext)			
CN113	29/6	1	HH
CN124	26/6	1	JJ
CN223	16/6	3	CC
(Int)			
CN223	16/6	3	CC
(Ext)			
CN224	18/6	1	II
CO111	29/6	3	FF
CO121	22/6	1	
			(Surnames A-P)
			(Q-Z)

TIMETABLE

Helpful exam hints

le. A separate examination room used for those students who need special facilities.

APPLICATION FOR SPECIAL EXAMINATIONS AND SPECIAL CONSIDERATION

Application forms for special examinations and special consideration are available from the Examinations Officer, Ground Floor of the Administration Building. Students are reminded that if such application is made on medical grounds, appropriate certification from a medical practitioner is required.

COMMENCING TIME OF EXAMINATIONS

Students should report to their respective rooms at least 15 minutes before the scheduled commencing time of their examinations. COMMENCING TIME OF 10 MINUTES BEGINS PRECISELY AT THE STATED COMMENCING TIME OF EACH SESSION.

UNIVERSITY POLICY ON STUDENTS ARRIVING LATE FOR FAILING TO ATTEND AN EXAMINATION

Students who arrive late for an examination

- (a) No candidate will be allowed to enter an examination room after the question papers have been distributed except by express permission of the chief supervisor.
- (b) Under Examination Rule 15* no candidate may be permitted entry to an examination room more than

twenty minutes after the commencing time for examinations of up to 1 hours' duration and forty minutes for examinations of longer duration (other than on re-entry after temporary absence under supervision).

- (c) Entry by a candidate at any time after the commencing time, whether initially or after temporary absence, may be refused by the chief supervisor if he/she considers that the candidate has had an opportunity of cheating while outside the examination room.
- (d) The names of candidates who arrive more than ten minutes after the examination commencing time will be listed in the chief supervisor's report.
- (e) A chief supervisor may not give extra time to a student unless instructed to do so by the Examinations Officer.

Chief supervisors however, may use their discretion in such matters and refer any candidate who arrived after the perusal period to the Examinations Officer for the purpose of (i) allowing the student the opportunity of sitting the examination in a separate room with full time and with minimum disturbance to themselves (as well as the rest of the students in the subject) and (ii) if necessary, allow sufficient time to compose themselves.

Students arriving after the times

stipulated in Examination Rule 15* may be permitted to sit the examination only if the Examinations Officer is satisfied that no other student has left the examination room or if the Examinations Officer has the permission of the lecturer concerned.

2. Students failing to attend an examination

Students failing to attend for an examination because they have mistaken the date or the venue are advised to contact the Examinations Officer as soon as possible after the error is discovered. In some cases it may be appropriate to apply for a special examination where a decision must then be made by the appropriate Dean after considering the evidence presented. Students are warned, however, that misreading a timetable does not necessarily constitute valid ground for the granting of a special examination.

*Examination Rule 15

Time for entry or departure

- (i) A candidate may not enter an examination room before he is given permission to do so by a supervisor, or after the following times:
 - (a) the first 20 minutes of an examination session of up to and including one and a half hours' duration;
 - (b) the first 40 minutes of an examination session of more than one and a half hours' duration.
- (ii) No candidate may leave the examination room during the periods of 20 minutes or 40 minutes specified in sub-rule (i), or during the last 10 minutes of an examination session.

SUBJECT	DATE	SESSION	ACCOM.
CO131	17/6	1	BB
CO223	15/6	1	BB
CO251	16/6	1	BB
(Int/Ext)			
CO261	24/6	1	
(Int)		(Surnames A-K)	CC
		(L-Z)	DD
CO261	24/6	1	HH
(Ext)			
CO336	20/6	1	BB
CO343	25/6	3	AA
CO353	24/6	4	FF
CO362	24/6	1	
		(Surnames A-N)	FF
		(O-Z)	OO
CO371	19/6	4	LL
CO833	17/6	3	CC

SUBJECT	DATE	SESSION	ACCOM.
CS100	16/6	3	
		(Surnames A-T)	BB
		(V-Z)	MM
CS109	16/6	4	AA
CS112	25/6	1	
		(Surnames A-K)	CC
		(L-Z)	DD
CS200	20/6	1	AA
CS202	16/6	3	AA
CS213	25/6	2	
		(Surnames A-N)	FF
		(O-Z)	GG
CS260	26/6	1	FF
CS300	19/6	4	
		(Surnames A-R)	MM
		(S-Z)	II
CS316	20/6	1	AA

SUBJECT	DATE	SESSION	ACCOM.
CS320	26/6	3	KK
CS330	23/6	2	GG
CS332	17/6	4	AA
CS735	20/6	1	AA
CS737	16/6	3	AA
CS748	25/6	2	GG
CS792	25/6	1	DD
CS795	26/6	1	FF
DP314	25/6	2	MM
DP407	15/6	2	GG
DP504	20/6	1	II
DP507	17/6	1	PP
DR204	20/6	2	BB

• Continued page 24

SUBJECT	DATE	SESSION	ACCOM.	SUBJECT	DATE	SESSION	ACCOM.	SUBJECT	DATE	SESSION	ACCOM.	
• Continued from page 23				E5308	18/6	2	FF	ED302	15/6	1	DD	
DR311	20/6	2	GG	E5311	15/6	1	FF	(Ext)				
DR411	20/6	2	BB	E5322	26/6	2	HH	ED340	17/6	2	MM	
DR506	15/6	2	BB	E5364	26/6	1	II	ED350	19/6	1	MM	
				E5375	17/6	2	MM	(Ext)				
				E5379	19/6	1	MM	EN104	19/6	1	MM	
DS302	24/6	2	II	E5410	16/6	1	AA	(Ext)				
DS504	23/6	1	LL	E5434	19/6	2	AA	EN107	16/6	3	MM	
DS507	25/6	2	HH	E5448	23/6	3	NN	(Ext)				
				E5461	16/6	2	HH	EN200	25/6	3	AA	
E1102	27/6	3	DD	E5465	20/6	1	DD	(Int)				
E1211	30/6	1	II	E5468	26/6	2	FF	EN200	25/6	3	AA	
E1447	24/6	3	HH	E5476	16/6	2	HH	(Ext)				
E1481)	25/6	3	AA	E9102	22/6	1	EE	EN201	16/6	1	GG	
E1881)	25/6	3	AA	(Group A)				(Ext)				
E2101	29/6	3	AA	E9102	22/6	3	EE	EN210	22/6	3	LL	
E2201	18/6	3	DD	(Group B)				(Ext)				
E2203	16/6	3	HH	E9102	23/6	1	EE	ET101/1	1/7	1	GG	
E2204	23/6	3	II	(Group C)				ET301	25/6	2	AA	
E2209	25/6	4	FF	E9102	23/6	3	EE	ET315/1	22/6	1	PP	
E2212	22/6	3	HH	(Group D)				ET317/1	18/6	1	II	
E2301	18/6	1	GG	E9301**	23/6	4	GG	FR236	19/6	3	GG	
E2303	16/6	1	CC	E9302**	23/6	4	GG	(Ext)				
E2305	23/6	3	II	E9301/**	23/6	4	AA	GE101	26/6	3	GG	
E2309	22/6	3	CC	E9302				(Int)				
E2318	26/6	1	HH	**Students taking EITHER E9301 OR E9302 as single subjects will sit in Room G13, Hawken Building.				GE101	26/6	3	II	
E2399	25/6	4	FF	Students taking BOTH subjects will sit a combined examination as one component in the Mayne Hall.				GE101	26/6	3	GG	
E2407	29/6	1	KK	EC100	17/6	1	FF	(Ext)				
E2411	16/6	1	CC	EC115	25/6	1	AA	GE103	17/6	1	GG	
E2427	18/6	1	GG	(Ext)			(Surnames A-SI)	GE111	23/6	1	DD	
E2429	19/6	3	BB	EC131	20/6	1	KK	GE207	15/6	1	CC	
E2431	26/6	1	II	EC211	23/6	3	GG	GE211	26/6	1	MM	
E2433/1	23/6	4	AA	(Int)			(Sm-Z)	GE212	15/6	4	FF	
(Parts B & D)				EC211	23/6	3	LL	GE216	24/6	2	DD	
E2433/2	24/6	3	LL	(Ext)			(Gr-O)	GE232	19/6	1	OO	
(Parts A & C)				EC212	18/6	3	BB	(P-Z)				
E2436	15/6	1	HH	(Int)			(Surnames A-Go)	GE305	15/6	2	BB	
				EC212	18/6	3	BB	(Gr-O)	GE393	16/6	4	II
E3171	18/6	3	AA	(Ext)			(P-Z)	GM115	29/6	1	QQ	
E3201	19/6	1	GG	EC211	23/6	3	LL	GM118	18/6	4	GG	
E3204	18/6	1	FF	(Int)				GM121	18/6	4	GG	
E3274	18/6	1	GG	EC212	18/6	3	BB	GM221	27/6	1	DD	
E3301	15/6	3	BB	(Ext)				GM222/1	17/6	1	KK	
E3305	19/6	3	BB	EC213	24/6	1	II	GM223/1	30/6	1	GG	
E3309	20/6	1	AA	EC230)	25/6	3	CC	GM294/1	16/6	1	GG	
E3310	22/6	1	GG	EC735)	25/6	3	CC	GM295/1	18/6	1	LL	
E3311	26/6	3	HH	EC281	26/6	3	LL	GM319	15/6	2	BB	
E3313	18/6	3	MM	(Surnames A-M)			(N-Z)	GM337	22/6	3	CC	
E3376	20/6	2	FF	EC312	23/6	3	MM	GM341/1	23/6	1	FF	
E3403	17/6	1	BB	EC313	16/6	3	GG	GM391	25/6	3	II	
E3431	25/6	3	II	(Int)				GM394	25/6	4	FF	
E3436	23/6	1	II	EC314	26/6	1	PP	GR100	18/6	3	AA	
E3438	15/6	3	BB	(Ext)				(Ext)				
E3459	19/6	1	LL	EC321	24/6	3	LL	GR108	23/6	1	II	
E3462	24/6	3	MM	(Int/Ext)				(Ext)				
E3464	27/6	1	FF	EC335	24/6	1	II	GR156	15/6	1	DD	
E3465	16/6	1	CC	EC341	26/6	1	PP	(Ext)				
E3467	22/6	3	CC	EC351	20/6	3	MM	GR241	23/6	3	II	
E3476	18/6	3	TI	EC361	19/6	3	GG	(Ext)				
E3821	17/6	1	GG	EC371	17/6	3	CC	GT100	17/6	3	AA	
E3840	24/6	3	MM	EC373	27/6	2	PP	(Int)				
				EC392	22/6	4	GG	(Surnames A-Se)				
E4209	20/6	1	BB	EC418)	17/6	2	MM	(Se-Z)				
E4210	18/6	3	DD	EC847)	17/6	2	MM	GT100	17/6	3	KK	
E4216	22/6	3	MM	EC865	25/6	4	MM	(Ext)				
E4360	15/6	2	BB	ED101	24/6	4	AA	GT105	26/6	3	FF	
E4371	19/6	3	II	ED200	15/6	1	DD	(Int)				
E4372	19/6	3	HH	(Ext)				GT105	26/6	3	FF	
E4380	22/6	3	CC	ED210	17/6	1	GG	(Ext)				
E4449	16/6	3	PP	(Ext)				GT114	16/6	4	AA	
				ED250	22/6	3	LL	GT201	27/6	2	DD	
E5101	15/6	3	BB	(Ext)				GT206	25/6	1	JJ	
E5202	25/6	1	FF	ED255	16/6	1	DD	(Surnames A-R)				
(Surnames A-K)				ED290	20/6	1	LL	(S-Z)				
								GT210	20/6	2	KK	
											FF	
E5250	15/6	1	II									
E5251	20/6	3	II									
E5285	25/6	1	HH									
E5301	17/6	4	AA									
E5304	20/6	1	HH									

EXAMINATIONS

SUBJECT	DATE	SESSION	ACCOM.	SUBJECT	DATE	SESSION	ACCOM.	SUBJECT	DATE	SESSION	ACCOM.
GT219 (Ext)	23/6	1	FF	LA202 (Int/Ext)	22/6	1 (Surnames A-K (L-Z))	LL	MP303 (Ext)	17/6	1	GG
GT233 (Int)	18/6	1	KK	LA204 (Int)	19/6	1	MM	MP305	29/6	1	MM
GT233 (Ext)	18/6	1	KK	LA204 (Ext)	19/6	1	AA	MP311	23/6	1	MM
GT239 (Ext)	16/6	3	MM	LA207 (Int/Ext)	26/6	1	AA	MP312	19/6	1	LL
GT241	25/6	3	DD	LA208 (Int/Ext)	15/6	1	AA	MP383	23/6	3	NN
GT252	27/6	1	AA	LA301 (Int/Ext)	23/6	1	AA	MP386	24/6	3	LL
GT254	18/6	1	MM	LA304 (Int/Ext)	29/6	1	AA	MS101	22/6	4	AA
GT255	23/6	1	FF	LA309 (Int/Ext)	17/6	1 (Surnames A-K (L-Z))	CC	MS171	16/6	1	FF
GT258 (Ext)	22/6	3	LL	LA405 (Int/Ext)	19/6	1	DD	MS201	27/6	1	AA
HM102	30/6	1	AA	LA406 (Int/Ext)	30/6	1	FF	MS301	15/6	4	FF
HM111	19/6	3	DD	LA411	20/6	3	GG	MS304	18/6	4	FF
HM220	17/6	1 (Surnames A-J (K-Z))	HH II	LA412 (Int/Ext)	22/6	1 (Surnames A-I (J-Z))	NN	MU205	15/6	4	FF
HM235	25/6	1	PP	LA413 (Int/Ext)	16/6	3	DD	MU320	24/6	3	II
HM250	15/6	1	DD	LA418 (Int/Ext)	25/6	1 (Surnames A-L (M-Z))	LL	MY101	24/6	4	AA
HM270	26/6	1	DD	LA420	27/6	2	II	MY210	20/6	3	FF
HM281	23/6	1	GG	LA423 (Int/Ext)	26/6	1	KK	MY262	20/6	3	LL
HM341	19/6	3	GG	LA430	15/6	1	FF	MY272	15/6	4	GG
HM385	17/6	3	CC	MA100	24/6	1	GG	MY281	15/6	2	BB
HT100	19/6	1 (Surnames A-L (M-Z))	JJ KK	MA170	24/6	1	HH	MY302	22/6	4	GG
HT102 (Int)	19/6	3 (Surnames A-L (M-Z))	LL MM	MA201	24/6	4	LL	MY320	24/6	3	HH
HT102 (Ext)	19/6	3	MM	MA271	19/6	3	GG	MY325	27/6	1	AA
HT104	29/6	3	AA	MA273	22/6	1	GG	MY331	18/6	3	BB
HT135	16/6	1 (Surnames A-J (K-Z))	LL MM	MA305	26/6	3	HH	MY333	29/6	3	AA
HT151 (Int)	24/6	1 (Surnames A-M (N-Z))	JJ KK	MA306	15/6	1	PP	MY337	19/6	1	MM
HT151 (Ext)	24/6	1	KK	MA307	27/6	1	HH	MY340	16/6	3	AA
HT176	20/6	1	HH	MA817	27/6	1 (Surnames A-L (M-Z))	LL	MY392	19/6	3 (Surnames A-O (P-Z))	CC
HT240 (Ext)	16/6	1	GG	ME100	19/6	3	BB	PA101	23/6	1	GG
HT241 (Ext)	16/6	1	GG	ME101	24/6	3 (Surnames A-K (L-Z))	CC	PA202/1	18/6	4	FF
HT257 (Ext)	17/6	3	CC	ME200	24/6	1	DD	PA203/1	24/6	1	II
ID100	23/6	3 (Surnames A-T (U-Z))	AA KK	ME201	19/6	3	AA	PA305/1	20/6	3	HH
ID108	15/6	1	GG	ME203	27/6	1	AA	PA307	30/6	1	HH
ID116	16/6	3	II	ME204	27/6	1	AA	PC106/1	26/6	3 (Surnames A-L (M-Z))	NN
ID117	16/6	4	FF	ME302	20/6	2	BB	PC206	20/6	2	BB
ID135	25/6	2	MM	ME305	15/6	3	FF	PC208	22/6	3	GG
ID200 (Paediatrics)	19/6	3	FF	MN201	15/6	4	HH	PC311	27/6	2	DD
ID201	19/6	4	GG	MN305	22/6	3	LL	PC330	19/6	2	AA
ID307/1 (Psychiatry)	19/6	1	OO	MN308	19/6	1	MM	PD102 (Ext)	18/6	1	MM
ID307/2 (Paediatrics)	19/6	3	FF	MP101	23/6	3 (Surnames A-K (L-Z))	CC	PH100	19/6	1	DD
ID309	18/6	3	AA	MP102	30/6	3	GG	PH103	17/6	3	BB
ID316	17/6	3	CC	MP103	27/6	3	AA	PH110	29/6	1 (Surnames A-S (T-Z))	LL
ID317	29/6	1	II	MP104	26/6	1 (Surnames A-R (S-Z))	CC	PH116	15/6	2	MM
ID319	25/6	2 (Surnames A-K (L-Z))	CC DD	MP105	18/6	3	DD	PH117	23/6	3	HH
ID400	22/6	2	AA	MP107	24/6	4	GG	PH124	25/6	4	LL
ID813	16/6	3	AA	MP171	20/6	2	BB	PH130	19/6	1	DD
JR101	15/6	4 (Surnames A-Sm (So-Z))	AA KK	MP173	26/6	1	DD	PH201	17/6	1	GG
JR211	20/6	1	FF	MP201	23/6	4	AA	PH207	22/6	3	DD
JR213	16/6	3	FF	MP203	29/6	1	FF	PH231	17/6	1	GG
JR215	27/6	1	PP	MP204	25/6	4	FF	PH251	20/6	1	II
				MP205	30/6	1	HH	PH324	26/6	3	QQ
				MP271	17/6	4	AA	PH331	16/6	3	GG
				MP274	23/6	3	HH	PH357	17/6	3	BB
				MP301	18/6	1	MM	PH360	18/6	3	MM
								PK101	27/6	1	CC
								PK201	18/6	3	AA
								PK301	15/6	3	FF
								PK302	18/6	1	MM
								PK333	15/6	4 (Surnames A-O (P-Z))	CC
								PL101	15/6	3	GG
								PL225	25/6	2	AA
								PL226	24/6	1	LL
								PL246	24/6	1	NN

• Continued page 26

SUBJECT	DATE	SESSION	ACCOM.
• Continued from page 25			
PL252	17/6	1 (Surnames A-J) (K-Z)	LL MM LL
PL261	24/6	1	LL
PL265	24/6	1 (Surnames A-Q) (R-Z)	MM PP NN LL FF II HH PP GG DD JJ
PL267	17/6	1	NN
PL338	18/6	2	LL
PL356	16/6	1	FF
PL366	19/6	1	II
PL367	25/6	4	HH
PL370	29/6	1	PP
PT101	16/6	2	GG
PT201	22/6	2	DD
PT230	26/6	3	JJ

SUBJECT	DATE	SESSION	ACCOM.
PT308/1	19/6	1 (Surnames A-N) (O-Z)	NN OO
PT308/2	19/6	3 (Surnames A-N) (O-Z)	NN OO DD
PT330	16/6	2	DD
PY101	18/6	1 (Surnames A-F) (G-R) (S-Z)	AA BB CC
PY102	20/6	3 (Surnames A-U) (V-Z)	BB LL
PY103	19/6	4 (Surnames A-Ma) (Mc-Z)	AA CC

SUBJECT	DATE	SESSION	ACCOM.
PY247	23/6	1	CC
PY255	29/6	3 (Surnames A-L) (M-Z)	LL MM
PY260	22/6	1 (Surnames A-Mi) (Mi-Z)	FF HH
PY261	20/6	3	AA
PY262	18/6	1 (Surnames A-R) (S-Z)	DD NN
PY342	25/6	3	AA
PY362	20/6	1	MM
RE100	22/6	1	PP
(Int)			

DURATION OF CENTRAL EXAMINATIONS

Following is a list of subjects being examined in the first semester exam period 1987 at the University of Queensland, and the duration of the central examination papers in hours.

AG201 3, AG203 2, AG206 3, AG211 1½, AG320 2, AG325 2, AG335 1, AG401 3, AG427 2, AG430 2, AG447 2, AN105/1 2, AN109/1 2, AN110/1 2, AN201/1 2, AN202/1 2, AN215/1 2, AN215/2 1, AN301/1 2, AN308 1, AN313 1½, AT231 1, AT243 2, AT351 1, AT363 2, AT411 2

BA100 2, BC101 1½, BC102 1½, BC141 1, BC206 2, BC207 2, BC208 2½, BC210 2, BC211 2, BC241 1, BC254 2½, BC302 2, BC306 2, BC309 2, BC311 2, BC323 2, BC341 2½, BC351 2, BT108 2, BT110 2, BT216 2, BT218 1½, BT221 2, BT339 2, BT340 2

CH101 2, CH102 2, CH103 2, CH104 2, CH121 2, CH123 2, CH137 2, CH145 2½, CH201 2, CH207 70 min., CH208 2, CH221 1, CH222 2, CH231-1, CH354 2, CL110 2, CL111 2, CL112 (Ext) 2, CL115 2, CN110 2, CN113 2, CN124 2, CN223 2, CN223 (Ext) 2, CN224 2, CO111 2, CO121 2, CO131 2, CO223 2, CO251 2, CO261 (Int) 2, CO261 (Ext) 3, CO336 2, CO343 2, CO353 2, CO362 2, CO371 1, CO833 2, CS100 2, CS109 2, CS112 2, CO200 2, CS202 2, CS213 2, CS260 2, CS300 2, CS316 2, CS320 2, CS330 2, CS332 2, CS735 2, CS737 2, CS748 2, CS792 2, CS795 2

DP314 1, DP407 1, DP504 2, DP507 2, DR204 2, DR311 1, DR411 2, DR506 2, DS302 1½, DS504 2, DS507 1½

E1102 2, E1211 3, E1447 2, E1481/ E1881 2, E2101 2, E2201 3, E2203 2½, E2204 3, E2209 1½, E2212 1½, E2301 3, E2303 3, E2305 3, E2309 3, E2318 2, E2399 2, E2407 3, E2411 3, E2427 3, E2429 3, E2431 3, E2433/1 2, E2433/2 2, E2436 1, E3171 2, E3201 2, E3204 2, E3274 3, E3301 3, E3305 3, E3309 1½, E3310 3, E3311 3, E3313 3, E3376 2, E3403 3, E3431 3, E3436 3, E3438 3, E3459 3, E3462 3, E3464 3, E3465 3, E3476 2½, E3821 2, E3840 3, E4209 2, E4210 3, E4216 2, E4360 2, E4371 2,

E4372 2½, E4380 3, E4449 3, E5101 3, E5202 2, E5250 1½, E5251 1½, E5285 2, E5301 2, E5304 2, E5308 2, E5311 2, E5322 2, E5364 3, E5375 2, E5379 2, E5410 2, E5434 2, E5448 2, E5461 2, E5465 1½, E5468 1½, E5476 1½, E9102 3, E9301 1, E9302 1

EC100 2, EC115 (Ext) 2, EC131 2, EC211 (Int) 2, EC211 (Ext) 2, EC212 (Int) 2, EC212 (Ext) 2, EC213 2, EC230/EC735 2, EC281 2, EC312 2, EC313 (Int) 2, EC314 (Ext) 2, EC321 (Int/Ext) 2, EC335 2, EC341 2, EC351 2, EC361 2, EC371 2, EC373 2, EC392 2, EC418/EC847 2, EC865 2, ED101 2, ED200 (Ext) 2, ED210 (Ext) 2, ED250 (Ext) 2, ED255 2, ED290 2, ED302 (Ext) 2, ED340 2, ED350 (Ext) 2, EN104 (Ext) 2, EN107 (Ext) 2, EN200 (Int) 2, EN200 (Ext) 2, EN201 (Ext) 2, EN210 (Ext) 2, ET101/1 2, ET301 2, ET315/1 2, ET317/1 2

GE101 (Int) 2, GE101 (Ext) 2, GE103 (Ext) 2, GE111 2, GE207 2, GE211 2, GE212 2, GE216 2, GE232 (Ext) 1, GE305 2, GE393 1, GM115 1, GM118 2, GM121 2, GM221 2, GM222/1 2, GM223/1 2, GM294/1 2, GM295/1 2, GM319 2, GM337 3, GM341/1 2, GM391 3, GM394 2, GR100 (Ext) 2, GR108 1½, GR156 (Ext) 2, GR241 (Ext) 1, GT100 (Int) 2, GT100 (Ext) 2, GT105 (Int) 2, GT105 (Ext) 2, GT114 2, GT201 2, GT206 2, GT210 2, GT219 (Ext) 2, GT233 (Int) 2, GT233 (Ext) 2, GT239 (Ext) 2, GT241 2, GT252 2, GT254 2, GT255 (Ext) 2, GT258 (Ext) 2

HM102 1½, HM111 1½, HM220 2, HM235 2, HM250 2, HM270 2, HM281 2, HM341 1, HM385 2, HT100 2, HT102 (Int) 2, HT102 (Ext) 2, HT104 2, HT135 2, HT151 (Int) 2, HT176 2, HT240 (Ext) 2, HT241 (Ext) 2, HT257 (Ext) 2

ID100 2½, ID108 2, ID116 3, ID117 1½, ID135 1, ID200 1, ID307/1 1, ID307/2 1, ID309 2, ID316 2, ID317 2, ID319 1½, ID400 2, ID813 2

JR101 2, JR211 2, JR213 2, JR215 2

LA202 (Int/Ext) 52 min., LA204 (Int/Ext) 1½, LA207 (Int/Ext) 2, LA208 (Int/Ext) 2½, LA301 (Int/Ext) 2, LA304 (Int/Ext) 2, LA309 (Int/Ext) 3, LA405 (Int/Ext) 2½, LA406 (Int/Ext) 2, LA411 2, LA412

(Int/Ext) 2, LA413 (Int/Ext) 2½, LA418 (Int/Ext) 2, LA420 3, LA423 (Int/Ext) 2, LA430 2

MA100 3, MA170 3, MA201 2, MA271 2, MA273 3, MA305 3, MA306 3, MA307/ MA817 3, ME100 3, ME101 3, ME200 3, ME201 2, ME203/ME204 2, ME302 2, ME305 2, MN201 2, MN305 2, MN308 2, MP101 2, MP102 2, MP103 2, MP104 2, MP105 2, MP107 2, MP171 2, MP173 2, MP201 2, MP203 2, MP204 2, MP205 2, MP271 2, MP274 2, MP301 2, MP303 (Ext) 2, MP305 2, MP311 2, MP312 3, MP383 2, MP386 2, MS101 1, MS171 1½, MS201 2, MS301 2, MS304 2, MU205 2, MU320 3, MY101 2, MY210 2, MY262 2, MY272 2, MY281 2, MY302 2, MY320 1½, MY325 2, MY331 2, MY333 2, MY337 2, MY340 2, MY392 1½

PA101 2, PA202/1 2, PA203/1 2, PA305 2, PA307 2, PC106/1 2, PC206 2, PC208 2, PC311 2, PC330 2, PD102 (Ext) 1½, PH100 3, PH103 3, PH110 2, PH116 2, PH117 2, PH124 2, PH130 3, PH201 2, PH207 2, PH231 2, PH251 2, PH324 3, PH331 2, PH357 3, PH360 3, PK101 1½, PK201 2, PK301 2, PK302 2, PK333 1, PL101 2, PL225 2, PL226 2½, PL246 2, PL252 2, PL261 2½, PL265 3, PL267 1½, PL338 1½, PL356 1½, PL366 1½, PL367 1½, PL370 1½, PT101 1½, PT201 1½, PT230 1½, PT308/1 1, PT308/2 1, PT330 2, PY101 2, PY102 2, PY103 1½, PY247 2, PY255 2, PY260 2, PY261 2, PY262 2, PY342 2, PY362 2

RE100 (Int/Ext) 2, RE110 (Ext) 2, RE113 (Int) 2, RE220 (Int/Ext) 2, RE260 (Ext) 2, RU101 2, RU201 2, RU220 2, RU221 2, RU301 2, RU401 2, RU404 2, RU411 2, RU808 2, RU810 2

SM101 1½, SM200 1, SM301 2, SM320 1, SO104 2, SO221 2, ST100/1 1½, SU200 1, SW102 2, SY103 1, SY311 1, SY352 2, SY374 3, SY375 3, SY382 2

VA100/1 2, VA203/1 1½, VA204/1 1½, VA205/1 1½, VB201 2, VB205 1, VB215 2, VB220 1½, VB342 1, VM403 1½, VM405 1½, VM406 2, VP300 2, VP311 1, VS401 2

ZL101 2, ZL103 2, ZL109 2, ZL115 2, ZL201 2, ZL301 2, ZL303 1, ZL304 2, ZL314 2, ZL319 2

EXAMINATIONS

SUBJECT	DATE	SESSION	ACCOM.	SUBJECT	DATE	SESSION	ACCOM.	SUBJECT	DATE	SESSION	ACCOM.
RE100 (Ext)	22/6	1	PP	SM 320	20/6	2	MM	VB201	26/6	1	LL
RE110 (Ext)	17/6	3	CC	SO104	18/6	4		VB205	27/6	2	GG
RE113 (Int)	15/6	1	CC			(Surnames A-L)	AA	VB215	17/6	3	CC
RE220 (Int/Ext)	25/6	1	MM	SO221	24/6	4	LL	VB220	22/6	1	KK
RE260 (Ext)	17/6	3	CC	ST100/1	22/6	3	II	VB342	22/6	1	II
RU101	27/6	3	HH	SU200	26/6	2	AA	VM403	15/6	2	II
RU201	20/6	2	BB					VM405	26/6	2	FF
RU220	23/6	3	NN	SW102	22/6	3	DD	VM406	24/6	2	DD
RU221	25/6	2	AA					VP300	22/6	2	AA
RU301	22/6	4	GG	SY103	16/6	1	FF	VP311	24/6	4	HH
RU401	17/6	3	CC	SY311	25/6	4	GG	VS401	19/6	2	AA
RU404	19/6	2	AA	SY352	20/6	2	BB	ZL101	19/6	1	FF
RU411	22/6	2	AA	SY374	24/6	3	MM	ZL103	25/6	4	
RU808	15/6	2	BB	SY375	24/6	3	MM			(Surnames A-R)	CC
RU810	22/6	2	AA	SY382	18/6	2	FF			(S-Z)	NN
SM101	17/6	2	AA					ZL109	25/6	4	AA
SM200	16/6	2	FF	VA100/1	16/6	1	DD	ZL115	22/6	3	FF
SM301	26/6	3		VA203/1	15/6	2	FF	ZL201	29/6	1	FF
		(Surnames A-T)	AA	VA204/1	17/6	2	LL	ZL301	30/6	3	FF
		(V-Z)	KK	VA205/1	18/6	3	CC	ZL303	20/6	1	NN
								ZL304	15/6	1	FF
								ZL314	27/6	1	DD
								ZL319	26/6	1	AA

Departmental examinations

SUBJECT	NO. HRS	DATE	SESSION	BUILDING	ROOM	SUBJECT	NO. HRS	DATE	SESSION	BUILDING	ROOM
AG324	2	29/6	1	Forg. Smith	B9	CL839	2)			Michie	734
AG329	2	23/6	1	Teakle	323	CL857	2)			Michie	734
AG334	2	26/6	2	Goddard	B1						
AG405	2	25/6	2	Teakle	323	CN229	2	15/6	3	Physiology	#1
AG409	3	19/6	2	Teakle	323	CN497	2)			Contact Dept	734
AG416	2	29/6	3	Teakle	323	CN824	2)			for details	734
AG422	2	24/6	2	Teakle	323						
AG424	3	22/6	1	Teakle	323	CO841	2	15/6	4 pm	Commerce	102
AG448	1½	26/6	3	Teakle	323	CS350	2	16/6	3	Forg. Smith	B9
Pracs											
AN105/2		22/6	3	Hirschfeld)		DB201	3	26/6	9 am	Physiology	Oral Biol. Labs
AN109/2		22/6	3	Hirschfeld)		DB301	2	17/6	9 am	Physiology	Oral Biol. Labs
AN110/2		15/6	3	Hirschfeld)		DB304	2	19/6	9 am	Physiology	Oral Biol. Labs
AN201/2		15/6	3	Hirschfeld)	Contact Dept	DB401	3	18/6	9 am	Physiology	Oral Biol. Labs
AN202/2		23/6	3	Hirschfeld)	for details						
AN215/1		16/6	1-4	Hirschfeld)		DR211	1½	18/6	9 am	Pre-Clinical	Turbot St
AN217		19/6	3	Hirschfeld)		(Groups A & B1)					
AN301/2		17/6	3	Hirschfeld)		DR211	1½	18/6	10.30am	Pre-Clinical	Turbot St
						(Groups B2 & C)					
AY101	2	29/6	6 pm	Physiology	#1	E1216	2½	25/6	3	Chem. Eng.	206
AY202	2	16/6	4 pm	Goddard	G12	E1309	3	22/6	3	Chem. Eng.	Annex
BT329	2	24/6	2	Goddard	F51	E1319	2	16/6	1	Chem. Eng.	206
CH215)	1	18/6	3	Chemistry	1118	E1409	3	26/6	1	Chem. Eng.	206
CH216)	1	18/6	3	Chemistry	1118	E1480	2	19/6	3	Chem. Eng.	206
CH230	1	26/6	3	Chemistry	1118	E1488	2	17/6	3	Chem. Eng.	206
CH303	2	25/6	2	Chemistry	1118	E1490/					
CH309	1	19/6	3	Chemistry	1118	E1890	2	17/6	9 am	Chem. Eng.	206
CH310	1	22/6	3	Chemistry	308	E1492/					
CH331	2	15/6	3	Chemistry	308	E1887	3	15/6	9 am	Chem. Eng.	206
CH332	1½/3	17/6	2	Chemistry	1118	E1888	2	19/6	2	Chem. Eng.	206
CL114	2)			Michie	734	E3444	3	22/6	2	Axon	405
CL128	2)			Michie	734	E4301	3	17/6	3	Forg. Smith	B9
CL212	2)			Michie	734	E4309	2½	17/6	3	Forg. Smith	B9
CL217	2)			Michie	734	E4313	3	25/6	3	Priestley	112
CL229	1)	Contact Dept		Michie	734	E4320	2	26/6	3	Richards	34
CL279	1)	for details		Michie	734	E4330	2	26/6	1	Axon	405

• Continued page 28

SUBJECT	NO. HRS	DATE	SESSION	BUILDING	ROOM	SUBJECT	NO. HRS	DATE	SESSION	BUILDING	ROOM
• Continued from page 27						JA115	2	22/6	1	Forg. Smith	81
E4421	2	23/6	1	Priestley	112	JA210	2	17/6	4	Forg. Smith	45
E4431	2	26/6	3	Axon	405	JA211	2	22/6	4	Forg. Smith	45
E4491	3	24/6	3	Goddard	B1	JA219	2	16/6	4	Forg. Smith	81
EC233	2	22/6	1	Commerce	205	JA310	2	22/6	4	Forg. Smith	Lang. Lab. A
EC331	2	23/6	2	Commerce	205	JA311	2	24/6	2	Forg. Smith	81
EL101	1½	24/6	3	Steele		JB100	1½	18/6	2	Forg. Smith	45
				(A-L)	21	JB112	2	15/6	4	Forg. Smith	81
				(M-Z)	26	JB216	2	16/6	4	Forg. Smith	14D
EL201	2	15/6	2	Steele	26	JB217	1	15/6	3	Forg. Smith	81
EL208	1½	16/6	3	Michie	533/542	JC110	1	23/6	1	Forg. Smith	Lang. Lab. A
EL210	1½	19/6	2	Michie	533	JC110	1	23/6	4	Forg. Smith	Lang. Lab. A
						(Evening)					
EN108	2	15/6	1	Forg. Smith	B9	JC111	2	24/6	4	Forg. Smith	45
EN192	2	22/6	1	Psychology	202	JC202	2	22/6	4	Forg. Smith	B6
EN201	2	16/6	1	Forg. Smith	45	JC212	2	19/6	4	Forg. Smith	B6
EN210	2	22/6	3	Forg. Smith	45	JC213	1	18/6	4	Forg. Smith	Lang. Lab. A
EN258	2	16/6	1	Forg. Smith	B9	JC214	2	17/6	4	Teakle	454
EN292	2	19/6	1	Michie	533	JC313	2	15/6	4	Forg. Smith	14D
EN293	2	24/6	3	Michie	533	JC314	2	18/6	1	Forg. Smith	14D
EN393	2	18/6	3	Michie	533	LA819	3	16/6	4 pm	APM	332
EN482	3	15/6	2	Michie	533	MA376/ MA813	3	17/6	2	Priestley	722
EN483	2	23/6	4	Michie	533	MP371	2½	19/6	1	Priestley	722
ET101/2		1/7	3	Teakle	402	MP378	2	16/6	2	Priestley	722
ET306		29/6	1-4	Teakle	428	MS103	1	26/6	4	Hawken	G13
(Oral)						MS272	2	18/6	1	Priestley	722
ET315/2		22/6	3	Teakle	402	MS371	3	18/6	4	Priestley	722
ET317/2		18/6	3	Teakle	412	MS473	2	15/6	2	Priestley	722
FA103	1½	23/6	3	Forg. Smith	B9	MS475	2	22/6	2	Priestley	722
FA205	2	19/6	1	Forg. Smith	Tower Lect. Th.	MU400	2	15/6	4 pm	APM	414
FA213	2	15/6	1	Forg. Smith	Tower Lect. Th.	OT100	1½	17/6	9 am	Therapies	102
FA215	2	18/6	3	Forg. Smith	Tower Lect. Th.	OT200/1	1½	15/6	9 am	Therapies	102
FA217	2	17/6	1	Forg. Smith	Tower Lect. Th.	OT200/2	2	22/6	3	Therapies	102
FA219	2	17/6	3	Forg. Smith	Tower Lect. Th.	OT302/1	2	15/6	3	Therapies	102
FA223	2	18/6	2	Forg. Smith	Tower Lect. Th.	OT302/2	1½	24/6	9 am	Therapies	102
FR110	1	15/6	4	Forg. Smith	72	OT303	1	22/6	3 pm	Goddard	B1
FR124	2	15/6	2	Forg. Smith	Lang. Lab. A	PA202/2	2	19/6	3	Seddon	SL2
(Day)						PA203/2	2	24/6	3	Seddon	SL2
FR124	2	15/6	4	Forg. Smith	Lang. Lab. A	PA305/2	1	23/6	3	Seddon	SL1
(Evening)						PB300	4	22/6	1-4	Med. Schl	Path. Prac. Rm
FR131	1	16/6	4	Forg. Smith	Lang. Lab. A	PC106/2	2	24/6	9 am	Steele)	
FR201	2	17/6	1	Forg. Smith	72	(Group A))	
(Day)						PC106/2	2	24/6	2 pm	Steele)	
FR201	3	17/6	4	Forg. Smith	72	(Group B))	
(Evening)						PC106/2	2	25/6	9 am	Steele)	Check Dept for details
FR209	3	19/6	3	Forg. Smith	86A	(Group C))	
						PC106/2	2	25/6	2 pm	Steele)	
GM122	2	16/6	1	Richards)		(Group D))	
GM222/2	2	17/6	3	Richards)		PC301/1	3	22/6-25/6		Steele)	
GM223/2	2	30/6	3	Richards)		(Prac.))	
GM294/2	2	16/6	3	Richards)	Contact Dept for details	PC301/2	1	17/6	2	Steele	26
GM295/2	2	18/6	3	Richards)		PC313	1	29/6	3	Steele	26
GM317/1	3	18/6	2	Richards)		PC314	1	26/6	3	Goddard	B1
GM317/2	3	19/6	3	Richards)		PC321	1	16/6	3	Steele	26
GM341/2	2	23/6	3	Richards)		PD100	1½	23/6	4	Forg. Smith	45
GR156	1	15/6	1	Forg. Smith	39	PD102	2½	24/6	4	Forg. Smith	B9
GR214	1	17/6	4	Forg. Smith	81	(Int)					
GR247	2	15/6	1	Forg. Smith	81	PH170	1	17/6	3	Parnell	G77
GT251	2	22/6	3	Steele	21	PH490(1)					
GT800	2	18/6	3	Forg. Smith	81	PH490(2)					
HT181	2	17/6	2	Forg. Smith	81	PH490(3)					
HT259	2	24/6	3	Forg. Smith	B9	PH490(4)					
HT266	2	19/6	3	Forg. Smith	45	PH490(5)					
ID109	1	15/6	3	Goddard	G20	PH490(6)					
ID311	2	26/6	3	Therapies	102	PH490(7)					
JA110	2	22/6	3	Forg. Smith	B9						
JA111	2	23/6	1	Forg. Smith	B9						

EXAMINATIONS

SUBJECT	NO. HRS	DATE	SESSION	BUILDING	ROOM
PH490/8)					
PH490/9)	Contact Dept for details				
PH490/10)					
PH490/11)					
PY104	2	30/6	3	Psychology	201
PY202	1	23/6	3	Social Sc.	G17
PY313	2	18/6	4	Psychology	201
PY331	2	16/6	1	Psychology	304
PY333	2	17/6	4	Psychology	201
PY335	2	15/6	4	Psychology	201
PY339	2	16/6	4	Psychology	302
PY340	2	23/6	3	Psychology	302
PY343	2	26/6	1	Psychology	201
PY346	2	24/6	3	Psychology	302
PY360	2	22/6	1	Psychology	302
PY402	2	18/6	3	Psychology	201
PY455	2	16/6	3	Psychology	302
RT103)	2				
(Intro.)		15/6	9.30am	Priestley	112
E2436)	1				
RT105	2	18/6	9.30am	APM	222
(History)					
RT110	2	17/6	9.30am	APM	222
(Economics)					
RT110	2	23/6	8 am	Union	Axon Rm
(GE111)					
RT112	2	24/6	5.10pm	Hawken	G13
(MP107)					
RT220	2	26/6	8 am	Parnell	G88
(GE211)					
RT222	2	15/6	9.30am	APM	226
RT223	2	17/6	9.30am	APM	226
RT314	2	15/6	9.30am	APM	226
RT332	2	17/6	9.30am	APM	332
(Plg Method & Tech. 3)					
RT332/					
RT838	2	18/6	4 pm	APM	230
(Threshold Evaluation)					
RT333	2	22/6	9.30am	APM	332
RT400		24/6	9.30am		
(Oral)					
RT411/					
RT830	2	23/6	4 pm	APM	230
(Plg Practice)					

SUBJECT	NO. HRS	DATE	SESSION	BUILDING	ROOM
RT828	1½	25/6	4 pm	APM	230
RT831	2	22/6	4 pm	APM	230
RU212	1	16/6	2	Michie	608
RU231	1	18/6	4	Michie	608
RU311	1	16/6	4	Michie	608
RU408	2	15/6	3	Michie	608
SO420	2½	18/6	4 pm	Michie	816
ST100/2	1	25/6	3	Forg. Smith	45
ST100/3	2	26/6	3	Richards	22
ST200/1	1½	23/6	2	Forg. Smith	45
ST200/2	1½	25/6	2	Forg. Smith	45
ST210	1	18/6	3	Forg. Smith	45
ST303	1	22/6	2	Forg. Smith	45
ST310	1½	17/6	2	Forg. Smith	45
ST322	3	15/6	2	Forg. Smith	45
ST420/1	2	19/6	2	Forg. Smith	81
ST420/2	1½	22/6	1	Forg. Smith	81
ST421	1	16/6	2	Forg. Smith	81
SY341	2	22/6	2	Forg. Smith	81
VA100/2	1	16/6	3	Seddon	AD
VA203/2)					
VA204/2)	1	19/6	3	Seddon	AD
VA205/2)					
Veterinary Medicine		30/6		Contact Dept	
(Year IV) - Orals				for details	
ZL102	1	17/6	3	Goddard	G20
ZL104	1	24/6	2	Goddard	G20
ZL110	1	26/6	3	Goddard	G20
ZL112	1	16/6	3	Goddard	G20
ZL117	1	18/6	3	Goddard	G20
ZL118	1	19/6	3	Goddard	G20
ZL202	2	22/6	2	Goddard	B1
ZL205	2	18/6	2	Goddard	B1
ZL209	2	26/6	3	Goddard	F5
ZL211	2	19/6	3	Goddard	F5
ZL212	2	17/6	3	Goddard	B1
ZL213	2	16/6	3	Goddard	F5 & F7
ZL307	1	24/6	2	Forg. Smith	45

Scholarships on Offer

Further information about the following scholarships and grants is available from the Scholarships Section, Room 609, J.D. Story Building, extension 3572.

Commonwealth Scholarship and Fellowship Plan Medical Awards: Senior Medical Fellowships - To enable senior academic staff to study developments in medical education and training and to review advances in the Fellow's own discipline. **Medical Fellowships** - For teachers to enhance their teaching/research experience in the UK. Also open to non-medically qualified people. For application deadlines, see Scholarships Section.

Commonwealth Scholarship and Fellowship Plan, New Zealand: For men and women in Australia to pursue postgraduate courses or undertake research in New Zealand. Covers travel, tuition, fees and other allowances. Closing: **May 30.**

Japanese Fellowship 1988/89, Hosei University: For foreign scholars to conduct a non-degree research program for up to 12 months. Closing: **May 31.**

Scuola Superiore Enrico Mattei Competition (Milan, Italy): For one year of postgraduate study in economic

management. Courses held in Italian. Closing: **June 10.**

New Zealand: For Australian citizens to undertake postgraduate courses or research in New Zealand from March 1988. Benefits include return air fare, tuition, laboratory and examination fees, maintenance, book, marriage and child allowances, medical and hospital benefits and assistance with establishment, internal travel and field expenses. Closing: **June 12.**

German Government Scholarships: To Australian citizens for postgraduate study at universities, technical universities and academies of art and music in the Federal Republic of Germany. Students must pass advanced German language examination to be accepted. Closing: **June 19.**

Telecom Australia Education Fellowship: For the final year of a (at least four-year) degree course of relevance to Telecom Australia research laboratories, for example engineering, combined science-engineering, science or computer science. Closing: **June 30.**

Philips International Institute of Technological Studies Postgraduate Scholarships 1988: For young graduate engineers and scientists to study or gain practical experience in the Netherlands.

Financial support includes air fares and living allowance. Closing: **July 17.**

Rothmans Fellowships: For postgraduate work within an Australian university. Worth up to \$25,000 plus fees and expenses. Closing: **July 24.**

Monash University Post-Doctoral Fellowships 1988: Tenable for two years in any department of the University. Worth from \$24,013 to \$36,600 p.a. Closing: **August 28.**

AFUW - A.C.T. Bursary: Free board and lodging for up to four weeks at Ursula College, Australian National University, Canberra to a woman graduate or final year honours student. Closing: **September 15.**

Australian Academy of Science, Academia Sinica Exchange Program: For lecture, fact-finding or research visits to China during 1988/89. Closing: **October 1.**

Thomas Morrow Prize 1987: A \$400 prize awarded to an undergraduate who, as part of his/her course writes the best essay in the field of Australian literature. Closing: **November 30.**

Swedish Institute Guest Scholarships: For studies or research where Sweden can offer special scientific or scholarly advantages. Closing: **December 1.**

Mining firms eager to fund students seeking postgraduate degrees

THE AUSTRALIAN mining industry has been so successful in attracting new graduates to pursue a mining career that it is having difficulty encouraging its finest young engineers to gain postgraduate qualifications.

Dr Tim Napier-Munn, of the Julius Kruttschnitt Mineral Research Centre at the University of Queensland, said the Centre was offering lucrative scholarships to encourage young mining engineers to take up postgraduate research.

However, only six of 80 recent applicants for the masters and PhD scholarships were Australian residents. The remainder applied from overseas.

This was despite the proven employment prospects for students with postgraduate qualifications and the benefits of postgraduate research to the Australian mining industry.

Dr Napier-Munn said this high demand from industry had greatly reduced the pool of graduate engineers willing to undertake postgraduate research — an essential ingredient in the future viability of the industry, he said.

It also resulted in fewer students entering the mining industry through scholarships.

"It is ironic that at a time when many people are concerned about the lack of research funding we are

able to offer scholarships annually worth up to \$20,000," he said.

"While we are confident that we can secure significant increases in our research funding levels, it is curious that our constraint is not research funding, but attracting the people to accept the scholarships available.

"We have also found ourselves seeking an expansion of student enrolment because our success in attracting funding has allowed us to greatly expand our research effort."

Dr Napier-Munn, JKMRC's mineral and coal processing research manager, said the Australian mining industry offered excellent long-term career potential.

The JKMRC's international reputation had ensured that every graduate had been employed immediately upon graduation, he said.

"Industry recognises the quality of the JKMRC program. We are continually being told that our graduates are immediately productive because they receive thorough training in a practical environment."

Dr Napier-Munn said the future viability of the Australian mining industry depended on continual research and development such as that provided at the Centre.

"The industry has to remain competitive and this can only be achieved by researching its way into new technologies. The industry needs thinkers to put new ideas into practice."

The self-funding JKMRC is a postgraduate school within the University's Department of Mining and Metallurgical Engineering. It specialises in the fields of mineral and coal processing, blasting analysis and rock breakage with particular reference to mathematical modelling and simulation and automatic control.

The Centre is funded principally by research grants from industry and industry-related agencies. Its students carry out all or most of their practical work in the operations of sponsoring companies, which are located throughout Australia and overseas.

Further details about JKMRC scholarships are available from the Director, JKMRC, Isles Road, Indooroopilly, Queensland, 4068 (telephone 378 1588), or from Dr Napier-Munn (telephone 378 1588).

Film series teaches oral history

A SERIES of three films demonstrating the use of oral history will be presented at Women's College at the University of Queensland on June 14 from 10 a.m. to 4 p.m.

The films are: *For Love or Money: a history of women and work in Australia*; *The Life and Times of Rosie the Riveter*; and *Lousy Little Sixpence*.

The program is sponsored by the South-East Queensland Branch of the Oral History Association.

Spokesman Dr Dale Mason said the films would be of value not only to teachers, students and family and local historians, but to others interested in 20th century social history.

Registration cost is \$10. For further details, telephone 870 1171 or 359 8115.

Health Service hearing tests

HEARING TESTS will be conducted by the University Health Service on Tuesdays from 2 p.m. to 4 p.m.

The tests are part of a hearing conservation program being run by the Health Service and the Occupational Health and Safety office.

Occupational health nurse Sister Margaret Briggs said appropriate follow-up and education would be given where necessary. Assistance would also be provided by the University's Department of Speech and Hearing.

Appointments for the 10-minute test may be made by telephoning 377 2511.

Courses

University faculties, departments and sections are invited to submit entries for the courses column, which is designed to publicise non-credit short courses at the University of Queensland. Details should be submitted on forms available from Media and Information Services, Level 2, J.D. Story Building, telephone 377 3367.

STAFF DEVELOPMENT

Administrative Practices Information Course, Course 5 — Library, Theses, general staff promotions, Wednesday, June 10, 9.00 a.m.—1.00 p.m., Academic Board Room, J.D. Story Building. A description of the operations of these sections. Contact: Mara Sikсна, Staff Development Officer, ext. 4194.

Public Speaking, Friday, June 12 and 19, 9 a.m.—11.00 a.m., Personnel Services, J.D. Story Building. An introductory course for anyone who must at times present a paper, convince a committee, make a presentation speech or be a guest speaker. Contact: Mara Sikсна, Staff Development Officer, ext. 4194.

LIBRARY HOURS

Queen's Birthday, June 8

The libraries listed will be open 9 a.m. to 5 p.m.

Central Library
Undergraduate Library
Biological Sciences Library
Law Library
Herston Medical Library
Engineering Library

ALL other libraries will be CLOSED.

EXTENDED LIBRARY HOURS

Undergraduate Library and Law Library will be open from 9 a.m. to 5 p.m. on the following Saturdays:

June 6, 13, 20

Central Library reading rooms only will remain open until 10 p.m. on the following Fridays:

June 12, 19

Other branch libraries may also extend their opening hours before the examinations begin. Please check the notice boards outside libraries for any changes.

Diary of Events

WEDNESDAY, MAY 20:

1.00 p.m. Health Services demonstration by a home economist from Country Style Bakery. Inquiries Sr Madden 377 2511. (Abel Smith Lecture Theatre)

1.10 p.m. Government/Sociology joint seminar "How to Study Class Consciousness, and Why We Should" by Professor Bertell Ollman, University of New York. (Rm 336, Michie Bldg)

3.45 p.m. Chemical Engineering seminar "Recent Developments in Raney Cu Zn Catalysts for Methanol Synthesis from Sythesis Gas" by Mr Edward Curry-Hyde, University of New South Wales. (Rm 206, Chemical Engineering Bldg)

4.00 p.m. Civil Engineering seminar "Brick Shear Walls in Solid Brick Housing" by Mr Peter Mullins. (Rm 321, Hawken Bldg)

4.00 p.m. Inter-campus seminar "People and Their Environment - Aboriginal Housing: State of the Art" by Dr Paul Memmott. Inquiries Professor Glen McBride 377 2763. (Rm 0.05, School of Australian Environmental Studies Bldg, Griffith University)

THURSDAY, MAY 21:

1.00 p.m. Anglican Society "Care, Share and Prayer". (Chaplaincy Centre)

1.05 p.m. Botany seminar "Effects of Water-logging on Three Pinus Taxa" by Mr M. Lewty. (Rm G32, Goddard Bldg)

1.10 p.m. Free lunch-time concert: Wendy Bott (cello). Inquiries 377 2014. (Nickson Rm, Architecture/Planning/Music Bldg)

FRIDAY, MAY 22:

10.00 a.m. Philosophy seminar "Derrida's Notion of 'Difference' and the Death of Icarus" by Mr Martin Taylor. (Rm 448, Hartley Teakle Bldg)

Noon Entomology seminar "Grappling with High Reproductive Rate, Great Mobility and Polyphagy - the Problem of Mites in Cotton" by Mr Lewis Wilson, Cotton Research, Narrabri. (Rm 509, Hartley Teakle Bldg)

Noon Geology and Mineralogy seminar "Current World of Petroleum Geology" by Dr R. Chapman. (Rm 34, Richards Bldg)

Noon Microbiology seminars, "In Vitro Construction of a Multipolysaccharase Transposon" by Mr Prasert Sunti-analerts and "Lactic Acid Bacteria in Tropical Silage" by Mr Mulyana Tjandraatmadja. (Rm 207, Microbiology Bldg)

1.00 p.m. Physiology and Pharmacology seminar "Effect of Temperature on Tuning of Auditory Receptors" by Dr Brian Oldfield. (Rm 122, Physiology Bldg)

1.00 p.m. Zoology seminar "Population Studies on New Zealand Freshwater Fish" by Mr Jeremy Baker, University of Auckland. (Rm G12, Goddard Bldg)

3.00 p.m. Anthropology and Archaeology seminar "Anthropology and History" by Professor Elizabeth Colson, University of California. (Rm 801, Michie Bldg)

3.30 p.m. English staff/postgraduate seminar "Feminism and Deconstructive Analysis" by Ms Darlene Sourile. (Rm 438, Michie Bldg)

SATURDAY, MAY 23:

2.00 p.m. Anthropology MSPD workshop "The Role of Anthropology in the

WANTED TO RENT

3 b.r. hse wanted to rent, pref. near Uni., from July. Ph. Debora 870 7642 or ext. 2379.

Hse for academic on study leave from late June to late August. Ph. ext. 3643.

U.S. prof. requires 3 b.r. accom., close t'port, from Aug. 24 to end Dec. Ph. Derick Unwin, 223 2551.

Concerts, special lectures and seminars, and University events of general interest may be published in the Diary of Events which appears in each issue. Entries, including date, time, department/section, and nature and details of event, must be in writing, and should include a name and telephone number.

Development of Indigenous Peoples" by Professor Elizabeth Colson, University of California. (Rm 801, Michie Bldg)

MONDAY, MAY 25:

1.10 p.m. Free lunch-time concert: Matthew Gamer (violin), Philip Nixon (violin). Inquiries 377 2014. (Nickson Rm, Architecture/Planning/Music Bldg)

1.30 p.m. Peace circle: a silent expression of concern for peace. All welcome. Inquiries Dr Piero Giorgi, 377 2723. (Great Court)

TUESDAY, MAY 26:

Noon Biochemistry seminar "Folates and Antifolates: Effects and Folate Nutrition upon Pteroylpolyglutamate Chain Length" and "Measurement of the Interaction of Dihydrofolate Reductase with Methotrexate a Tight-binding, Competitive Inhibitor" by Dr P. Nixon. (Rm 328, John Hines Bldg)

1.00 p.m. Student Christian Movement discussion "Liberation Theology's Use of the Bible". (Chaplaincy Centre)

1.00 p.m. Free lunch-time concert: chamber music by student ensembles. (Nickson Rm, Architecture/Planning/Music Bldg)

1.10 p.m. Physics film series on relativity "Pushed to the Limit". (Rm G7, Parnell Bldg)

THURSDAY, MAY 28:

1.00 p.m. Health Service demonstration by home economist (Egg Marketing Board). Inquiries Sr Leila Madden 377 2511. (Abel Smith Lecture Theatre)

1.00 p.m. Anglican Society "Homeless Clowns" - a look through drama, and discussion at the position of the homeless. (Chaplaincy Centre)

1.05 p.m. Botany seminar "Native Legumes of Queensland" by Dr J.B. Hacker. (Rm G32, Goddard Bldg)

1.10 p.m. Free lunch-time concert: Joanne Sorensen (flute), Angela Retchford (flute). Inquiries 377 2014. (Nickson Rm, Architecture/Planning/Music Bldg)

2.00 p.m. Regional and Town Planning seminar "Adaptation of Threshold Approach in Highway Planning in Valued and Sensitive Landscapes" by Ms M. Roszkowska-Kuiken. (Rm 230, Architecture/Planning/Music Bldg)

5.00 p.m. Illustrated lecture "The Influence of Oriental Art on Australian Art" by Ms Jackie Menzies, Curator of Asian Art, Art Gallery of New South Wales. Inquiries 377 3744. (University Art Museum)

FRIDAY, MAY 29:

10.00 a.m. Australian Studies Centre colloquium "Civil Religion: the Australian Profile". Inquiries 377 2658. (Rm 530, Michie Bldg)

10.00 a.m. Philosophy seminar "On Rival Interpretations" by Dr Gary Malinas. (Rm 448, Hartley Teakle Bldg)

11.00 a.m. Studies in Religion seminar "Structuralism and the Study of Religion" by Mr Trevor Jordan. (Rm 636, Hartley Teakle Bldg)

Noon Entomology seminar "Temperature, Development and Population Dynamics of *Heliothis punctigera* and *H. armigera*" by Mr Greg Daghish. (Rm 509, Hartley Teakle Bldg)

Noon Geology and Mineralogy seminar "Strain Measurement Research towards Earthquake Prediction" by Dr Michael Gladwin. (Rm 34, Richards Bldg)

Noon Microbiology seminars "Bacteria of Public Health Significance in

Raw Goats' Milk" by Ms Lisa Simms, and "Multiple Drug Resistant Bacteria at Royal Brisbane Hospital" by Dr M.L. Thong, R.B.H. (Rm 207, Microbiology Bldg)

1.00 p.m. Physiology and Pharmacology seminar "Miserotoxin Poisoning in Animals" by Dr Mike Pass. (Rm 122, Physiology Bldg)

1.00 p.m. Zoology seminar "Wildlife Conservation versus Wildlife Utilisation" by Professor Antoon de Vos, former Chief, Parks and Wildlife Section, FAO. (Rm G12, Goddard Bldg)

3.00 p.m. Anthropology and Archaeology seminar "The Prehistory of the Grapevine" by Dr Michael Walker, University of Sydney. (Rm 801, Michie Bldg)

SATURDAY, MAY 30:

8.00 p.m. UniMusic "Vespers" (Mon-teverdi) - University Orchestra and Choir, and Queensland University Musical Society Choir, with soloists, conducted by Dr Gordon Spearritt. Admission by program (\$12, \$9 concession). (St John's Cathedral)

MONDAY, JUNE 1:

1.00 p.m. Amnesty International's Uni Chapter meeting. Inquiries Leanne Cain 379 2813. (Ryan Rm, Student Union Complex)

TUESDAY, JUNE 2:

Noon Biochemistry seminar "The Conformation and Dynamics of the Intrinsic Membrane Peptide, Gramicidin A in Phospholipid Bilayers: a Carbon-13/NMR Study" by Dr R. Smith. (Rm 328, John Hines Bldg)

1.00 p.m. Student Christian Movement meditation - a Silent Retreat. (University Lake)

1.10 p.m. Free lunch-time concert - Robert Huestis "Music for Virginals", Renaissance songs and dances and transcriptions from the Lute Music (J.S. Bach). (Nickson Rm, Architecture/Planning/Music Bldg)

1.10 p.m. Physics film series on relativity "Marking Time". (Rm G77, Parnell Bldg)

WEDNESDAY, JUNE 3:

8.00 p.m. Inaugural lecture "Initiative and Referendum: The People's Law" by Professor Geoffrey D. de Q. Walker, professor and head of the Department of Law. (Abel Smith Lecture Theatre)

What's on at Schonell

Friday, May 22: 7.15 p.m. Blue Velvet (R); 9.30 p.m. Eraserhead.

Saturday, May 23: 3 p.m. Macaroni; 5 p.m. David Lynch's Dune; 7.15 p.m. Blue Velvet (R); 9.30 p.m. Eraserhead.

Sunday, May 24: 3 p.m. Macaroni; 5 p.m. David Lynch's Dune; 7.15 p.m. Blue Velvet (R); 9.30 p.m. Eraserhead.

Monday, May 25: 7.15 p.m. Blue Velvet; 9.30 p.m. Eraserhead.

Tuesday, May 26: 7.15 p.m. Blue Velvet; 9.30 p.m. Eraserhead.

Friday, May 29: 7.30 p.m. Kangaroo; 9.30 p.m. Platoon.

Saturday, May 30: 3 p.m. Kangaroo; 5 p.m. Blue Velvet (R); 7.30 p.m. Kangaroo; 9.30 p.m. Platoon.

Sunday, May 31: 3 p.m. Kangaroo; 5 p.m. Blue Velvet (R); 7.30 p.m. Kangaroo; 9.30 p.m. Platoon.

Monday, June 1: 7.30 p.m. Kangaroo; 9.30 p.m. Platoon.

Tuesday, June 2: 7.30 p.m. Kangaroo; 9.30 p.m. Platoon.

This Schonell program is subject to alteration.

Bright new look for King's riverfront

A TEAM OF Community Employment Program (CEP) workers is making an impressive landscaping transformation of the riverfront along King's College.

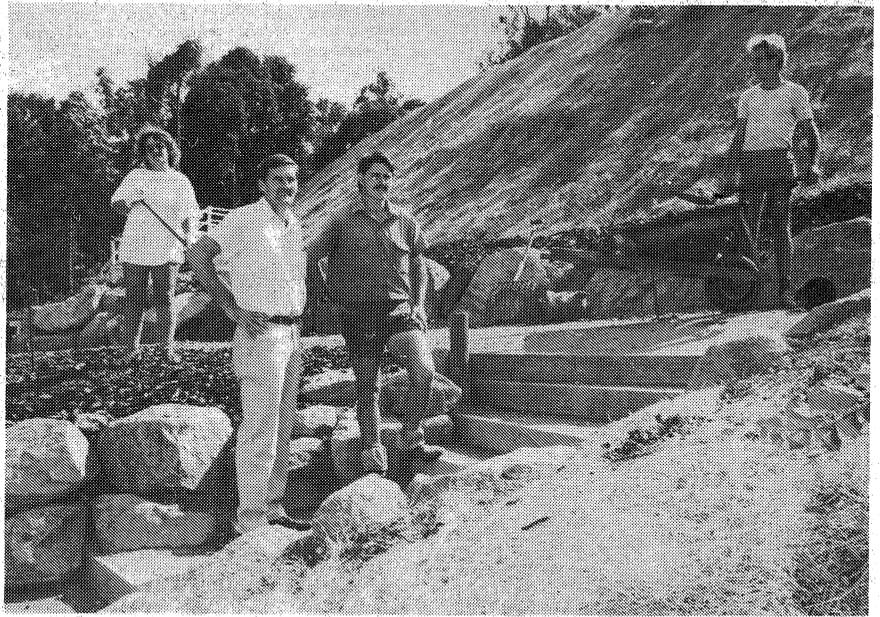
Four months ago, when the work began, the riverfront was a combination of overgrown weeds and vines, discarded rubbish and an unpaved carpark.

Now more than 200 metres of the river bank includes a nature path, timber seats and steps, a barbecue area, bark gardens, stone retaining walls and a large area of lawn. A boat ramp and an aerial walkway through tree tops is also planned.

Work will continue for another two months and will cost \$100,000 when completed. The project is being funded by the Federal Government and the college will contribute one-fifth of the cost.

Principal Dr Ian Mavor said the beautification program provided valuable work experience for the four men and four women, many of whom were long-term unemployed.

The project was also in keeping with extensive landscaping on the University campus and an appropri-



Dr Mavor (second from left) discusses the landscaping progress with CEP team supervisor Mr Fitzpatrick.

ate program during Brisbane's Year of the River.

Dr Mavor said the quality of work was outstanding.

The college had been fortunate,

he said, because the supervisor, Mr Dennis Fitzpatrick, was a qualified horticulturalist with landscape gardening experience on a number of major Brisbane sites.

PUBLIC LECTURE

Public lecture profiles people power

DIRECT LEGISLATION, which in some countries gives voters power to adopt or change laws, will be the topic of a free public lecture at the University of Queensland on Wednesday, June 3.

Professor Geoffrey Walker, head of the University's Law Department, will sketch the history of direct legislation, how it is legally structured in different countries, and the main arguments for and against it.

He will also discuss whether the system favours the political left or the right, the costs involved, and why the people of the states and nations that have it value it so highly.

The lecture will conclude with an estimate of the prospects for introducing the system in Australia.

This will be Professor Walker's



Professor Walker: voters as lawmakers.

inaugural lecture as a new professor of law and will begin at 8 p.m. in the Abel Smith Lecture Theatre on the University's St Lucia campus.

Professor Walker recently was asked to give evidence to the Commonwealth Constitutional Commission on direct, or citizen-initiated, legislation, and has just published a book on the subject.

Initiative in Referendum: The People's Law is believed to be the first comprehensive study of citizen-initiated legislation to appear in English or French since before World War I.

The system was already popular in countries such as the United States, Switzerland and Italy, and usually had two aspects, Professor Walker said.

One of these allowed voters to

force referendums on new legislation by petitioning the government.

The other, which the Australian Democrats had tried to introduce in Australia, allowed voters to suggest new laws and require the government to submit them to a binding referendum.

The main argument in favour of introducing the system in Australia, he said, was that it was more democratic, involving people directly in government and reducing apathy and cynicism.

The main argument against it was that it was often suggested Australians generally voted "no" in referendums. But this was not the case at State level, where two-thirds of all referendums since Federation had been carried.

Professor Walker has degrees from the University of Sydney and the University of Pennsylvania, has practised law at the bar and in industry, and is a former Assistant Commissioner with the Trade Practices Commission.

He has taught at the University of Pennsylvania, the University of Sydney and the Australian National University, and has published about 50 articles in legal and economic journals and two books. He is now writing a book on the rule of law.

UNIVERSITY NEWS

A NEWSPAPER FOR THE UNIVERSITY OF QUEENSLAND



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