Newcastle key to advanced-design microchips

An appointment is expected to be made in March to fill the newly-creating Chair of Microelectronics of The University of Newcastle.

The position was advertised internationally and interviews will be held in mid-March, with the successful applicant expected to take up the position in June-August.

The Chair of Microelectronics is partly funded by AWA Limited, Australia's leading electronics firm and is part of an arrangement between the company and the University to develop Newcastle as a key Australian centre for advanced-design microchips.

The University will work closely with AWA in developing new designs and products in integrated circuits (or microchips) for possible manufacture at AWA's new $65 million plant at Homebush.

The Managing Director of AWA Limited, Dr Peter Crawford, said the company had been impressed by the standard of original research and design work being done by the University's Department of Electrical and Computer Engineering.

AWA is a member of the Newcastle-based Australian Warships Systems consortium which is

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1989 — an exciting year for Newcastle

UNINews is a monthly magazine that tells the story of the great variety of the University's research and other activities.

It is published for the information of readers within the Hunter Region, and within educational, academic and scientific communities around Australia.

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• The Managing Director of AWA Limited, Dr Peter Crawford, presents a cheque to the Vice-Chancellor, Professor Keith Morgan, at the Press Conference announcing the University of Newcastle's Chair in Microelectronics.

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Central Coast Campus

University network proposal

The University of Newcastle and the Hunter Institute of Higher Education have jointly accepted the responsibility for the development of a higher education presence on the Central Coast.

A campus will be established on vacant land at Ourimbah presently vested in the Minister of Education and Youth Affairs. The site, located in the geographic centre of the Central Coast urban development, is approximately 80 hectares in size. Fifteen hectares is suitable for relatively easy construction. This project is expected to place Professor Keith Morgan, said the close geographic centre of the Central Coast will be dependent upon access to

ment of a higher education profession. Although there are some facilities in existence, for purposes of long-term physical planning development the site is appropriately described as a 'green fields' site. An initial start

will be dependent upon access to temporary accommodation either in rented. portable or other temporary use for academic purposes.

The Department of Employment, Education and Training has earmarked 40 EFTSU with associated funding for 1989 for the Central Coast Campus. It is expected teaching will commence in second semester, with students enrolling on a part-time basis. Opportunities for full-time enrolments may occur in 1990.

Specific courses to be offered are yet to be finalised. Provisional market research by the Central Coast Tertiary College Action Committee indicates a strong demand for courses in Education, the Arts, and Business. There also appears to be a demand for postgraduate programs.

The development and use of the site is viewed as a joint venture with the Department of TAFE. In addition the WEA and other local agencies have expressed an interest in involvement. A local Planning Committee has been established to coordinate a community fundraising drive with a view to

financing an establishment building.

The Vice-Chancellor and the Principal of the Hunter Institute have jointly agreed to the assignment of Central Coast development responsibility to Dr Les Eastcott. Dr Eastcott will report directly to the Vice-Chancellor and will work closely with the Deputy Vice-Chancellor (Academic) and the Deputy Vice-Chancellor (Administration) as well as Deans and Heads of Schools affected by developments in ensuring appropriate arrangements are put in place.

It is expected that in the near future advertisements will appear for the appointment of the foundation staff member, Campus Manager/Program Coordinator, for the Campus.

Any person wishing to clarify issues raised above, or wanting to discuss Central Coast Campus matters further, are very welcome to contact Dr Eastcott at 687311.
Boeing supports aviation course

Support for the University's aviation course has come from the United States Boeing Company.

Mr Jim Chorlton, Vice-President of International Sales for Boeing Commercial Airplanes, and Mr Bob Helenik, a Director, flew from Sydney and made a presentation to the Vice-Chancellor, Professor Keith Morgan.

Boeing made a donation of $8,500 for the establishment of an annual award to be presented in the final year of the new course in aviation.

The award, to be known as the Boeing Prize for Excellence in Aviation, will be presented to the graduating student who has demonstrated the highest level of attainment in both pilot skills and academic performance.

To the pleasant surprise of the Vice-Chancellor, Mr Chorlton donated a 'plane-in-a-bottle' to the University as an appropriate trophy.

This uncommon and very skillfully made piece comprises a glass model of the Boeing Company's first plane—a B&W twin-float seaplane, which established the company in the airplane business in 1916—contained in a decanter.

Mr Chorlton said Boeing was very interested in pilot-training programs like the one provided by the University. 'We are very pleased to visit the campus and hope we have helped in some small way the advancement of aviation'.

Professor Morgan expressed appreciation and said Boeing's support was important to the University, because the aviation course, which had been introduced this year, was innovational and the first of its kind to be offered by a university in Australia.

He said the trophy was most impressive and he felt sure the University as a whole would be lost in admiration of it.

The 'plane-in-a-bottle' can be viewed in the trophy case outside the Vice-Chancellor's suite on the top floor of the McMullin Building.

Budget may allow for limited expansion

The total Commonwealth operating fund grant for the University of Newcastle for 1989 was $48.97m. The figure for 1988 was $47.44 million.

The Vice-Chancellor, Professor Keith Morgan, said the preliminary consideration by the University's Planning and Resources Committee indicates that with this increase of 3.1/4 per cent the University may be able to make provision for some limited expansion and still remain within its budgetary provision. This is in contrast with the situation in this and earlier years when the University has had to draw heavily on its very limited private income to make good the shortfall in Commonwealth funding.

In 1986 the University set itself objectives of eliminating the deficit in Commonwealth funding, re-ordering staffing priorities to reflect shifts in student demand, and making provision for important new developments. It now seems likely that these objectives can be attained in the near future. This result would only be achieved by implementation of the tough economy measures and the accompanying restraint and restructuring that had been accepted by the University community. The resultant savings represent some 3 per cent of expenditure.

The provisional budget for 1989 makes provision for a significant number of new and replacement academic and administrative positions. These will reflect support for continued growth in key areas. The Commonwealth has recognised the University's ability to respond to perceived national needs in the provision of funds for an additional 100 places in 1989.
The Council of the University has appointed Directors of the five new schools which will administer the allocation of resources within the University.

The Directors of the Schools (Humanities, Economic and Information Sciences, Engineering and Architecture, Medicine, and Science and Mathematics) took up their positions on January 1 and will each serve a term of three years.

In this edition of UNINEWS we profile the School of Humanities.

Research areas diverse as developing a system of map reading for blind people, the effects of glaciation, computer analysis of literature, Australian military and church history, Tibetan folk music, the quality of school life, community theatre, 17th century philosophy, and exploring the problems of dyslexia can all be found within the new School of Humanities at the University of Newcastle which comprises the Faculties of Arts and Education.

The School's Director, Associate Professor John Ramsland, sees diversity of research and Faculties retaining their academic identity as essential features of the School.

'While I believe the academic decisions reside within the Faculties and the financial matters rest with the School there obviously has to be an interconnection for the two to work successfully, to better mesh together,' he said.

The whole budget for the School had been worked out late last year, including allocations to each Department within the School, and since taking on the Directorship in January 1 I have been visiting Departments, following up on matters related to the budget, and trying to sort out any difficulties or problems that have arisen since the beginning of the new academic year.

'I am concerned with dispensing the funds as equitably as possible in all Departments with the understanding that various disciplines are taught in different ways. This is a difficult but fundamental issue that I will continue to deal with this year in consultation with Heads of Departments and a small elected committee. I wish to avoid, however, setting up a bureaucracy that slows down decision-making.'

'For future budgetary planning purposes I intend to get Heads of Departments together and formulate with them a series of sound academic principles that would underpin budgetary decisions.'

'There are certain things within the budget that are tied — such as full-time academic and secretarial staff salaries. So it's really the area of part-time teaching and recurrent funding where we need to establish a series of principles. The research output of each Department has to be considered. For example, there may be some way of rewarding or compensating people who are doing a lot of research by giving them a small amount of extra funding for part-time teaching.'

'There is a wide spectrum of acknowledged research and there are some very fine achievements in that research within the School,' Professor Ramsland said.

'This sort of research improves the quality of teaching within the Faculties, or it should, because there is a link between teaching and research that is basic to the University way of life.'

'As a student comes into contact with an academic at the cutting face of research the direct and indirect communication that occurs between the two is of extreme importance.'

Professor Ramsland sees the Bachelor of Arts degree as enormously flexible.

When people say you cannot go into a particular profession with a BA he answers simply that with a BA you can go into a wide range of professional areas.

The general nature of the degree has a validity in the industrial world more indirectly and subtly than a specialised professional degree and this means the student who completes a BA degree has a certain degree of flexibility as well as challenge,' Professor Ramsland said.

'There appears to be quite a lot of evidence to indicate that such students can be and are employed in a number of interesting and important areas including university administration.'

Professor Ramsland believes today's BA students, within

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UNINEWS does not receive Government grants of subsidies.

TUNRA Ltd was incorporated in 1969 as a Company Limited by Guarantee by the Council of the University of Newcastle, to offer a broadly-based research and specialist education service to industry, commerce and the community.

TUNRA's Board of Directors are all current or former members of the University Council or academic staff.

TUNRA is financially self-supporting and does not receive Government grants of subsidies.

THE UNIVERSITY OF NEWCASTLE RESEARCH ASSOCIATES LTD.

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the environment of the new two
semester calendar year, will be
able to put together a much more
varied range of subjects.

They will be able to
develop what they choose around
particular themes that have to do
with their career interests and
career prospects as well as their
scholarly interests," he said.

"Today BA students are
going into occupations that did
not exist 20 or 30 years ago.

Subjects like Geography
have taken on some new
meanings In terms of
well," he said, at
the local council level as envi­
ronmental officers.'

Professor Ramsland con­
siders the BA from the University
of Newcastle to be as good as one
from any other Australian
university.

"We have very strong
Faculties of Arts and Education
staffed by people who have a wide
range of sound research interests,
he said.

'I believe our strength lies
in the intimate relationship staff
have with students because of
reasonably smaller class sizes,
especially in subjects at the
second year undergraduate level
and beyond and at the postgradu­
ate coursework Masters level as
well.

'A survey completed
several years ago of all Aus­
tralian universities revealed the
level of student satisfaction about
the BA course here was quite high.
I don't think that has diminished
over the years. A more recent
survey has indicated that the
University's Faculty of Education
is rated the best in Australia In
four out of six dimensions and is
in the top five overall.'

As for the future of the
School of Humanities, Professor
Ramsland sees his task as
Director to go forward and ensure
the School as a whole gets a
budget that allows It to cope with
day-to-day tasks and, more
importantly, allows it to develop
in new and vital directions.

'If there is a lot of produc­
tivity and achievement in
research then the quality of
teaching is developing and one
would like to see that reflected in
the budget,' he said.

'I basically see my role as a
problem-solver. The kind of
decision-making the Director has
to make about certain details
means that these matters can be
cleared up more quickly than in
the past when you had to wait for
a committee to meet or a senior
executive to find time to address
the problem.

'What might be a minor
problem to the University as a
whole could be a major matter to
a particular Department.'

This is part of the stream­
lining process being introduced
by the University.

But it is a streamlining
process that, according to Profes­
or Ramsland, has to be done in a
 humane and responsible manner.

The best interests of stu­
dents, teaching and research
should be foremost In any
decision-making,' he said.

'Decisions should be made
as far as possible with the two
factors of student needs and
academic standards
firmly in mind.'

Expertise from different
departments drawn together

A new postgraduate course in
medical social science, specifi­
cally for community health
researchers, has been established
at the University.

The new Diploma in
Health Social Science (Medical
Social Science) and Master degree
programmes will take its first
student this year.

The course will draw
together the expertise in the
teaching of medical social science
present in the Department of
Sociology and the experience of
clinicians in the Centre for
Clinical Epidemiology and Bio­
statistics (CCEB).

As one of the Co­
ordinators, Dr Claire Parsons, of
the Department of Sociology,
explains that Sociology students
had expressed an interest in
careers in medical social science
in recent years. They saw the
demand for trained researchers
In the fields of clinical and
community health.

'After we began work on
establishing the course, the CCEB
also expressed an interest in
offering a programme in medical
social science. We decided to
combine our resources.'

Students taking the one
year full-time Diploma course
will work in the CCEB at the
David Maddison Clinical Sci­
ences Building in Newcastle.
They will be able to proceed to
Masters and Doctoral degree
programmes.

* Ms Gaynor Pike is the first
Sociology graduate to enter the
postgraduate medical social
science course. She is eligible to
receive a scholarship in the
Master's year of the programme.
Record enrolments for popular course

After the enrolment for the University’s Open Foundation Course (OFC) increased to a record level, the course will be expanded this year to include a teaching centre at Foster/Tuncurry.

Enrolments in the standard part-time course has already been received from centres as distant as West Wyalong, Bourke and Grafton.

Mr John Collins, the Acting Director of the Department of Community Programmes, which administers the course, said: ‘We’ve had a waiting list for next year’s OFC since mid-1988’.

Last year’s OFC commenced with 570 enrolments, including participants who studied in the Central Coast and Muswellbrook. About 300 completed the course, which is almost 50 per cent more than last year.

Mr Collins said it was not a bad record for a course that began in 1975 with 40 people and was expected to peter out by the 1980s.

‘There’s quite a large growth in the number of mature-age people in the Hunter who are now eligible to enter a tertiary institution.

‘Most of the expansion in the course comes from an increased number of people who enrolled in the intensive (full-time) OFC.

‘Enrolments in 1988 were nearly double the 1987 figure, and were clearly restricted by lack of accommodation places for people who would otherwise have moved to Newcastle for the duration of their course.

‘The rest of the increase is from the standard part-timers in Newcastle.’

About two-thirds of students were women, with student backgrounds varying, Mr Collins said.

‘We accept anyone over the age of 20. There is no upper age limit.

‘It’s very awkward to generalise, but about two-thirds of the bulk of all enrolments are in their 30s and 40s.

‘And there are frequently people in their early 20s who left school before the HSC, realised they made a mistake, and are looking for a way back into the mainstream education system.’

Mr Collins said the OFC was attractive because it was taught at the University by university people and formed a good introduction into academic life.

Top students

Mr Collins flanked by Janette Reynolds (left) and Isabelle Hockings (right) who topped the Open Foundation Course in 1988.

TUNRA offers industry research and consulting services, drawing on expertise available from the following Faculties (and Departments) of the University of Newcastle:

- Architecture
- Arts (Classics, Drama, English, Geography, History, Linguistics, Modern Languages, Philosophy and Sociology)
- Economics and Commerce (Commerce, Economics, Law and Management)
- Education
- Engineering (Chemical/Materials, Civil/ Surveying, Electrical/Computer and Mechanical)
- Mathematics (Mathematics, Statistics and Computing Science)
- Medicine
- Science (Biological Sciences, Chemistry, Geology, Physics and Psychology)
Information

Latest technology in Library

CD-ROM (Compact Disc-Read Only Memory) is a low-cost, optical storage medium for large volumes of data. One 5" CD-ROM disk has a 600-Mbyte capacity and can store data, text, graphics and images to be read with a laser beam.

The only equipment required to use CD-ROM is a microcomputer, CD-Rom disc drive and printer.

The advantage of CD-ROM technology for information retrieval lies in the fact that there is a fixed annual charge for purchasing CD-ROM databases and no telecommunication costs are incurred. It allows unlimited searching and leisurely browsing by all sections of the University from undergraduates to faculty.

The Auchmuty Library now has three units dedicated to accessing CD-ROM databases and a fourth on order.

The Biomedical Library has OSHROM, a system containing three major databases in occupational health and safety:

- NIOSHTIC, the database of the National Institute for Occupational Safety and Health, US Department of Health and Human Services.
- HSELINE, the database of the Health and Safety Executive, a UK Government agency responsible for guidance, advice, inspection and enforcement of all aspects of occupational safety and health in the United Kingdom, and
- CISDOC, the database of the International Occupational Safety and Health Information Centre of the International Labour Organisation.

Collectively, the databases contain approximately 250,000 citations from more than 500 journals and 100,000 monographs and technical reports back to 1960.

For further information or access, contact Janet Brice at Extension 690.

The Government Publications Section of the Library now has Supermap CDATA 86, a CD-ROM version of the 1981 and 1986 censuses.

The major advantage over the microfiche, or printed versions, of the census is that you can combine a variety of variables at any degree of specificity and display the results as a table or coloured map. For instance, it would be possible to produce maps of people in different age groups with an income under $10,000 living in the local government areas of the Hunter Valley.

The Audio-Visual Section of the Library has the PC-SIG Library on CD-ROM, which contains thousands of public domain programs for IBM compatible microcomputers. For access, see the staff at the AV counter.


Mrs Jenny Scoble, Assistant University Librarian (left) shows Mr Linklater the CD-ROM optical storage system used for information retrieval in the Library. The new high-tech system is being accessed by Dr Ellen Jordan.
Chinese linguistic student

Mr Guo Wu, a student from Xian, in the People's Republic of China, says his experiences at this University have been worth all the trouble involved in coming to Australia.

He has been here for the last five months and is working on a PhD degree in the Department of Linguistics.

He enjoys working in his Department with all the nice and friendly people and the convenience provided by the Auchmuty Library.

Mr Wu says: 'I'm very glad I'm here. It's worth all the trouble.'

'When I first got the letter of offer in China', he says, 'I felt both encouraged and worried; encouraged, because it's very difficult for a Chinese student to get a scholarship in Arts; worried, because from this year scholarship holders have to pay the overseas student charge, which I could never afford.'

'However, it's my long-cherished wish to study linguistics in Australia. So I borrowed the money from abroad and took the opportunity — and the risk.'

Mr Wu says once in a while he can still feel the shadow of the overseas student charge. 'But I think I'll be able to manage if I can find some part-time employment.'

At present he is giving a short course at the WEA — 'China Today'. 'I enjoy the class and last week the Department of Community Programmes told me of a possible position as Mandarin Chinese tutor next year.

He says his linguistic background is a long story. He learned Russian at high school and English by reading English novels.

At the Hua Zhong University of Science and Technology, whilst studying for an MA degree, he developed an interest in linguistics.

'I've been interested in text linguistics or discourse analysis', he says. I wrote my MA thesis on Lexical Cohesion in English text and want to continue my research in this direction to further explore some cohesive devices in English and their function in the text.'

$2m Wetlands centre opened by Minister

The official opening of the $2 million Shortland Wetlands Centre marked the end of the centre's 'establishment phase'.

The State Minister for the Environment, Mr Moore, unveiled a plaque at the centre in November last year to commemorate the Bicentennial event.

'There's heaps more work to be done,' Mr Brian Gilligan, the Director of the centre said, 'but we've become operational after three years' hard work.'

A large crowd of members of the Hunter Wetlands Trust and supporters was present for the opening, which was combined with a varied program including displays, canoe rides, watching the egrets, talks and even games, such as Wombat Squash, organised by the youth support group, the Young Wetlanders.

Visitors paid close attention to demonstrations of research being conducted into Australian egrets which breed at the centre.

'We're now launching into the consolidation phase', Mr Gilligan said.

The Hunter Wetlands Trust has grown rapidly since it was formed in 1984 and has close to 2,500 members.

Members of the University have been closely involved in the work of the Trust and the establishment of the centre.

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UNINEWS — The University of Newcastle magazine
Edited by John Armstrong,
Information Office, Rooms 171 and 172, McMullin Building,
University of Newcastle, New South Wales, 2308. Telephone: (049) 68 5328