Most faculties and departments of the University have several initiatives in place to reward and encourage high achieving students at various levels of their studies.

The Department of Biological Sciences held a ceremony on 6 April to recognise the outstanding efforts of some of their students.

Three students who completed their studies at Illawarra high schools last year have settled in well in Biological Sciences. Their abilities have enabled them to fast-track their degrees, thanks to the Department’s new Advanced Science scheme.

Paul McDonald (Warilla High); Alexander Watson (Shoalhaven High); and Kane Organ (Bulli High) (pictured above from left), who all had TERs greater than 90, sat for an examination when they started here this year, the successful completion of which gave them exemption from some or all of their first year Biology subjects. These students will also be able to become involved in research projects in their second year rather than the normal third year requirement.

• Jane Malcolm (below) was congratulated by Departmental Head Professor Rob Whelan.

Jane won the inaugural Biology Challenge Prize for a competition introduced by Biological Sciences last year.

Schools in Illawarra, south Sydney and south-western Sydney were invited to send their ‘best’ Biology student to sit for a challenge exam based on first year Biology examinations with questions selected for their relevance to the HSC curriculum.

The top student among those who ended up enrolling at Wollongong won a prize of $500. Jane completed her HSC at Kanahooka High.

Continued page two
Wollongong encourages high achievers

From page one

- Thea van de Mortel, (pictured right) a third year Biology student, was selected to receive the Michael Birt Prize for the best performance among all Biology students in the department.

Michael Birt, Biologist and Inaugural Vice-Chancellor of this university established this prize to encourage high achieving students of Biology.

Environmental Science student develops effluent treatment process

Chromates are widely used for corrosion control in cooling waters and for passivating metal surfaces such as zinc/aluminium alloy coated steel.

However, they are known to be mutagenic and a widespread search is on to find replacements which are safer to use and easier to dispose of.

A mixture of phosphoric acid and vanadate will prevent surface staining of alloy coated steel.

This alternative is much less toxic than chromate, but would still require removal of the vanadium from spent passivating fluid before disposal.

David Blackmore, an Honours student in Environmental Science, carried out laboratory trials of a treatment process which adsorbs the vanadate on freshly-precipitated hydrous iron oxide.

Initially, the phosphate interfered with the adsorption of vanadate.

This problem was solved by first precipitating the phosphate by addition of lime.

The vanadate was then removed by adding an iron salt which quickly formed hydrous iron oxide and adsorbed the vanadate with high efficiency (better than 99 percent).

The new two-stage process is compatible with an existing plant at the steelworks used to treat pickle liquor and rinsewaters.

Moreover, the calcium phosphate precipitate from the first stage (apatite) does not contain vanadium, and potentially could be converted to superphosphate fertiliser.

David was awarded the Alan Sefton Prize in '94 for the best performance in the final year of the Bachelor of Environmental Science degree.

The project was part of an ongoing research program on effluent treatment and resource recycling and was supervised by Associate Professor John Ellis (Chemistry Department) and Dr Peter Riley (BHP Sheet and Coil Products Division).

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Bookings open for 1995 University Day address

University Day celebrates the establishment of a University College on this site on 8 May 1961.

Each year, the University marks its anniversary by inviting a distinguished speaker to deliver the University Day Address and by acknowledging the achievements of its staff members.

The 1995 Address, entitled 'Internationalisation of the Illawarra Region' will be delivered jointly by Mr Ian McMaster, Group Manager, BHP Sheet and Coil Products Division and Professor Gerard Sutton, Vice-Chancellor of the University on Monday 8 May at 6 pm in The Hope Theatre.

As part of the program, the Chancellor will present the following Awards to Members of the University:

- The Ethel Hayton Award
- The 25 Year Staff Awards
- The Vice-Chancellor’s Award to Academic Staff for Excellence in Teaching
- The Vice-Chancellor’s Award for Outstanding Service by Members of General Staff
- University Day Student Award

Jane Edwards, Marilyn Meier and David Vance from the Faculty of Creative Arts will provide entertaining musical interludes during the evening.

Light refreshments will be served afterwards.

At 8pm a University Day Dinner will be held in the Functions Room, Union Building. Seats may be purchased for the dinner.

Members of the University or the community who wish to attend one or both of these functions are asked to contact Antoinette Matarranz, phone 213 169 for bookings by Monday, 1 May.

Seating may be limited and entry cards will be allocated on a ‘first-come’ basis.
Interim Director of the BHP/University of Wollongong Institute for Steel Processing and Products, Professor Keith Enever, has already made significant progress in establishing the institute on this campus.

Announced on 6 March by BHP's Managing Director Mr John Prescott, the institute will undertake world class research and teaching at postgraduate level.

The research program is intended to include as major areas of expertise, steelmaking, casting and coating of steels, particularly advanced polymer and metal alloy coatings.

Other core research areas are likely to include rolling and thermal treatment of steel; surface engineering; automation and process control, and managing cultural change and the impact of new technology.

Professor Enever said the first year will be one of planning and making contact with potential contributors to the institute.

'Our aim is to have additional staff in place by 1996,' he said.

'We expect to make three senior level appointments of world-class standard in coating technologies, electric arc steel making and management of cultural change.'

Professor Enever has already visited many academics on campus, who are working in related fields, to explore what role they may play.

These include staff in the faculties of Engineering, Informatics, Commerce and Science. He would like to hear from anyone on campus who could contribute to the institute's planned research or teaching.

He is also talking to technical and human resources people at BHP to ensure their collaboration.

'Once I am sure what the University can contribute and what BHP expects, I will be developing a business plan to be presented to senior BHP and University executives possibly by late May,' he said.

'I have found a high level of enthusiasm to contribute at BHP and the University, which augurs well for the future.'

Professor Enever has been an Honorary Principal Fellow in the Department of Mechanical Engineering since 1988 during which time he devised and taught a course in Industrial Fluid Mechanics.

This was a popular course with final year students.

He has given departmental research seminars and liaised with the University on the BHP Scholarships for PhD students.

He is also an occasional guest singer in the tenor section of the University Singers and took part in the University's acclaimed performance of Carmina Burana last year.

In 1986 he left his position as Reader in Hydraulic Engineering at the Department of Fluid Engineering and Instrumentation at the Cranfield Institute of Technology (a postgraduate technological university in the UK) to join BHP Research, Port Kembla initially as Manager, Engineering R&D, then Manager, Market Development R&D and finally, up to his appointment as Interim Director of the Institute, as Research Manager, Administration and Quality Development.

Professor Enever is a graduate of the University of London where he was awarded a Bachelor of Science (Engineering) and his PhD.

His research interests have included work in pressure surges particularly in complex pipe systems, gas-liquid mixtures, blood vessels and in flexible tubes.

He has also worked on a method for measuring suspended solids in estuaries, and at BHP was responsible for a group of researchers covering process modelling, novel instrumentation development and building product development.

For further information about the Steel Institute, contact Professor Enever on (042) 214 498.
Scholarship winners from all over NSW

Cootamundra student, Daniel Nixon, visited the University on Open Day last year and decided it would be a great place for him to complete his studies in Computer Engineering.

Daniel’s hard work in the HSC paid off when he was rewarded with a Cooperative Scholarship worth $9300 per year for the next four years.

Daniel was recently joined by his family and other University of Wollongong scholarship winners at a presentation ceremony in the Union Function Centre.

The students had won 1995 Cooperative Education, Meritorious, Faculty, Residential, Equity and Merit and Foundation scholarships based on a range of criteria included outstanding academic achievement, personal skills such as leadership, and interest and dedication towards study.

This year scholarship applications had come from all over Australia.

Deputy Chancellor, Dr Brian Gillett, said there has been a surge in the number of female scholarship winners, particularly in Informatics and Engineering.

This year’s winners came from the local area, Sydney, Canberra, and country NSW including Goulburn, Cootamundra, Batemans Bay, West Wyalong, Port Macquarie, Leeton and Bathurst.

The ceremony also provided an opportunity to note the success of current scholarship holders and pay tribute to those organisations who have made this scholarship program possible by sponsoring scholarships.

The scholarships program was expanded after 1990 beyond university-funded scholarships alone.

At the 1995 ceremony, the University continued to recognise corporate and community individuals who have provided support for the university through scholarships, inkind gifts, deferred giving or cash donations.

Membership of the University Foundation was bestowed upon several organisations and in 1995 included Konica Australia, Qantas, BHP Research, the NSW Aboriginal Education Council and Westpac Commercial Banking.

1995 Members of the University of Wollongong Foundation:

- BHP Research - Port Kembla Laboratories; Wollongong City Council; Bomaderry Bowling Club; Graham Bell & Bowman; Hon Stephen Martin, MP; Honorary Chapter of the Alumni Association; Howard MultiMedia; Illawarra Electricity (Shoalhaven); Konica Australia Pty Ltd; Mr Stephen Anderson; Mrs Phyllis Boyd; Mr Peter Tyree; NSW Aboriginal Education Council; Qantas; Rotary Club of Berry-Gerringong; Shoalhaven City Council; South Coast Equipment; Southern Counties Credit Union; Warne Investment Management Services Ltd; Westpac Commercial Banking, Illawarra Region.

Sponsors and students are:

- ACT City Services (Roads & Transport): Dominic Sullivan (Civil Engineering).
- ACT Electricity & Water: Shane Day (Computer Engineering).
- BHP Research - PK Laboratories (2): Aidan Donaghy (Mechanical Engineering).
- Bomaderry Bowling Club: Darren Wearne (Commerce).
- Honorary Chapter of the Alumni Assoc: Eric Rowe (Creative Arts).
- Illawarra District RL Football Club: Peter Cattle (Education).
- Illawarra Electricity: Melanie Sykes (Environmental Engineering).
- Illawarra Electricity (Shoalhaven): Michael Payne (Commerce).
- NSW Aboriginal Education Council: Brendan Powell (Education).
- The Illawarra Credit Union Ltd (1): Annette Jackson (Maths & Finance).
- The Illawarra Credit Union Ltd (2): Marina Djuric (Commerce).
- The Illawarra Technology Corporation Ltd: Daniel Nixon (Computer Engineering).
- Cooperative Education: Dominic Sullivan (Civil Engineering); Nicole Stanford (Materials Engineering); Aidan Donaghy (Mechanical Engineering).

Mr Jack Cornell, representing ACT City Services, Roads and Transport, sponsor of the Cooperative Scholarship in Civil Engineering, congratulates the recipient, Dominic Sullivan.

Continued next page
Mature Age Creative Arts Student and Foundation Scholarship winner, Eric Rowe, “tinkles the ivory” with fellow Creative Arts students, Faculty scholarship winner Aimee Moffat and Faculty of Law scholarship winner Luke Gerber (back).

neering); Shane Day (Computer Engineering); Daniel Nixon (Computer Engineering); Melanie Sykes (Environmental Engineering).

Foundation Co-operative: Eric Rowe (Creative Arts); Annette Jackson (Maths & Finance); Marina Djuric (Commerce); Peter Cattle (Education); Brendan Powell (Education); Michael Payne (Commerce); Darren Wearne (Commerce).

Meritorious: Johnele Blackledge (Arts); Angie Matsinos (Creative Arts); Jennifer Geddes (Education); Michael Sloggett (Engineering); Jennifer Vella (Health & Behavioural Sciences); Daniel Franklin (Informatics); Michael Phillips (Law); Emma-Kate Potter (Science).

Faculty Scholarships: Jenny Mansfield (Arts); Cheryl Yates (Commerce); Chelsea Hampell (Commerce); Aimee Moffat (Creative Arts); Bryony Anderson (Creative Arts); Kathy Hudson (Education); Kellie Little (Education); Steven Roso (Engineering); Danielle Carr (Health & Behavioural Sciences); Shona Fletcher (Health & Behavioural Sciences); Peter Siminski (Informatics); Ashley Hunter (Informatics); Luke Gerber (Law); Vanessa MacFarlane (Science); Leonie Cluse (Science); Ben Clase (Science – Physics).

Equity & Merit: Karen Bromfield (Science); Stefanie King (Commerce); Jake Matic (Science); Michelle Colgrave (Science); Susannah Collins (Science).

Residential: Gregory Holmes, Weerona (Commerce); Melinda Clack, Campus East (Law); Ejen Liao, International House (Education).

Cooperative Scholarship winner Daniel Nixon is congratulated by Jim Langridge, Managing Director of the Illawarra Technology Corporation, which sponsored the scholarship.
Several people have expressed concern recently about the safety of Northfields Avenue and especially about the absence of pedestrian refuges or crossings.

The University has also been concerned about Northfields Avenue for a long time and several approaches have been made over the years to local authorities to have crossings installed.

In an attempt to address the problem, Wollongong City Council and the University agreed that the best course of action would be for the Council to hand over the management of Northfields Avenue to the University.

Then, within whatever conditions the Council set, the University could do things like put crossings in place, improve the kerbing and guttering, install proper bus bays and angle parking.

In order to do this the City Council has to de-proclaim Northfields Avenue as a public road and obtain the proper approvals to hand it over to the University to manage.

This process in itself has been lengthy and requires public advertisement.

There was considerable opposition from the local community which was concerned that the road would be closed to through traffic, which was never the intention.

These objections had to be addressed and overcome.

The University thought the matter had been resolved last October when the City Council passed a resolution to hand over the management of the road to the University.

Plans were drawn up for immediate safety improvements and the University began to develop longer term strategies.

The intention was to have pedestrian refuges in place well before the beginning of Autumn session this year.

However, it seems that despite all the agreements at the local level, the proposed handover of the road required the formal approval of the State Department of Conservation and Land Management (CALM).

This turns out to be not a simple matter, requiring further public gazettal, time for objections to be lodged and considered, and then a Departmental decision.

In fact, a repeat of the process already undertaken by Wollongong City Council.

Gazettal will take place on 15 April, but it will be at least two to three months before a decision is reached.

In the meantime, the University can do nothing to improve the conditions in Northfields Avenue.

Safety crossings will be put in place as soon as the University is legally able to do so.

Indonesian cultural display

The University of Wollongong branch of the Indonesian Student Society held an Indonesian cultural display in the City Mall in Wollongong from 19-20 April.

The aim was to show Indonesia and its diversity in its fullest colour to promote its traditions and cultures so the understanding of Indonesia by the Australian community was increased.

The students would also like to raise the awareness of the potential use of the Wollongong Indonesian community for dancing and handcrafts displays.

Traditional dances, handcrafts, batik and other traditional products, folk songs, traditional fashion parade and Indonesian food stalls featuring satay and other less well known delicacies were on show.

Organisations such as the Embassy of the Republic of Indonesia, the Consulate General of the Republic of Indonesia, Wollongong City Council, the University and the Committee for Overseas Students, and Wollongong College of TAFE assisted with the event.

The University Council met on 7 April. The outcomes and, where necessary, the contact officers for the major items are shown below.

- Two new courses approved: Master of Arts in Maritime Policy (Faculty of Arts) and the Graduate Certificate in Information and Communication Technology (Faculty of Informatics).
- Prizes and Scholarships - delegation to Senate Standing Committee to approve conditions. Contact: Donna West, ext. 3079.
- 1994 University Financial Statements approved.
- University Privacy Policy approved as binding on all members of the University. Available soon on Public Information Server under Management Handbook. Printed copies being prepared for Units.
- University Day Student Award approved. Contact: Lynn Woodley, ext. 3360. Information available from Faculty Offices and SRC. Also featured in Campus News.
- Guidelines on Conflicts of Interest in Close Personal Relationships approved as Code of Conduct for all members of the University. Contact EEO Office, Maxine Lacey, ext. 3917.
ITC ANNOUNCES PROFIT FOR 1994

ITC has announced a profit of $4,536 for the 1994 financial year ending 31 December. The profit, modest in itself, represents a very significant turnaround when compared with the previous year's $1.2 million loss.

Managing Director Jim Langridge commented: “One of the good things about the improvement is that the profit is the outcome of a steady growth in revenue over the twelve month period to December 1994. Our revenue grew from $13,378 million in 1993 to $15,584 million in 1994. That's a growth rate of over 14 per cent.”

“Our Shareholder the University has benefited directly from that growth, for instance through the $571,000 in ITC scholarships and $58,000 in donations, which form part of total cash transfers to the University of $4,536 million.”

“The positive result for 1994 is especially satisfying because ITC continued to invest in technologies which are still in the developmental stages but which the Board believes have significant potential for future returns.” Jim Langridge said.

The audited financial results will be available in early June when the annual report is to be published.

TWO YEARS ON, GOING STRONG: WOLLONGONG'S INSTITUTE FOR AUSTRALIAN STUDIES, DUBAI

Just two years ago, on April 24, 1993, Wollongong's Institute for Australian Studies, Dubai was opened officially by the Minister for Private Education in the United Arab Emirates.

Illawarra Technology Corporation Chairman George Maltby paid tribute this week to the vision, patience and plain hard work that had enabled ITC to succeed in establishing the Institute.

“This was not an easy venture” Mr Maltby said. “No other Australian university was established in Dubai and indeed there was no direct presence of any non-Emirates university. Wollongong was the first Australian university to establish a campus in the Gulf and one of the few universities from the western world to operate directly in Dubai. This project has been driven and sustained by the vision and determination of the Managing Director, Jim Langridge. He has been backed up extremely well by ITC’s Manager International, Bill McGaw and the Director of IAS, Martin van Run and his staff in Dubai.”

“The Board of ITC has supported the project in the original financial commitment when we had hopes and dreams but not a lot of fees coming in and through the tough early days. We appreciate also the support of the University Council and the various Faculties in getting courses approved and in making sure the administrative arrangements were in place to help us deliver a quality product. “The establishment and steady growth of the Institute is another illustration of the University of Wollongong’s front rank status as a leader in educational innovation and a striking example of the commitment of the University and ITC to internationalisation” Mr Maltby said.

Students at the Dubai campus can enrol for a variety of degree courses, including:

- Bachelor of Business Administration; Master of Business Administration; Bachelor of Arts; Bachelor of Commerce; Bachelor of Computer Science; Bachelor of Information Technology and Communication

The Wollongong Twinning Program enables students to commence a bachelor degree in Commerce, Computer Science or Information Technology and Communication at IAS and complete it at Wollongong.

A major recent development has been the establishment of the Complete Degree Program, providing an entire Wollongong degree course at Dubai. This applies for the Bachelor of Business Administration, the Bachelor of Arts and the Master of Business Administration.

The Institute also offers a range of English language courses, prepared in conjunction with the Wollongong English Language Centre. Courses include: General English (all levels); Business English; English for University Studies; Concurrent English for Secondary School Students; IELTS, TOEFL and SAT examination preparation.

The Institute’s University Entrance Certificate (UEC) has been prepared by the Foundation Studies Program at Wollongong, to prepare students for entry to the degree programs on offer. The UEC course covers 26 weeks of instruction, just as the Foundation Studies Program does at the Wollongong campus.
New Member of ITC Team: Canio Fierravanti

At the beginning of April, Canio Fierravanti joined ITC as Manager, Government Business Development and Manager, University Liaison.

Born and raised in Wollongong, Canio has a Bachelor of Commerce from the University of Wollongong, and brings to his new responsibilities an appropriate blend of experience of the world of business and of the Wollongong campus. For the past three and a half years he has been Policy and Development Analyst in the University’s Planning and Marketing Division. Previously he worked with Westpac and was for a time seconded by them to work with the Australia-Taiwan Business Council and the Confederation of Asia Pacific Chambers of Commerce and Industry.

One of Canio’s first tasks will be to develop existing relationships between ITC and the University, in order to maximise appropriate emerging market opportunities.

Centre for Maritime Policy Provides Practical LAW OF THE SEA Training

Officers of the Papua New Guinea and Indonesian Navies were recent participants in the popular program of short courses on Law of the Sea, Exclusive Economic Zone (EEZ) Management and Maritime Enforcement, conducted by ITC’s Centre for Maritime Policy.

In one of the most complex and economically significant areas of international law and diplomacy, the Centre for Maritime Policy provides a set of courses which provide an understanding of the legal principles from the policy viewpoint of the military and coast guard officers, fisheries officers and other officials who have the responsibility for developing policies and procedures for protecting and enforcing their countries’ economic interests in coastal areas and on the high seas.

Centre Director, Commodore Sam Bateman says the courses help to meet a growing demand. “As countries throughout the world seek increasingly to register and enforce their rights to sea zones, officials with responsibilities in this area need to be able to get a sound grasp of the legal principles and some practical guidance on what the principles mean in practice” Sam Bateman said.

“Maritime countries such as Australia require clear, effective national policies for using the sea and exploiting its resources. However, conflicts can arise between different uses of the sea and between different levels of Government with marine responsibilities.

“Internationally, there has been a proliferation of conventions, agreements and regulations relating to the sea but, in some instances, these lack consistency from one to the other. It is highly important that policy-makers have an understanding of the relevant legal regimes.”

Commodore Bateman commented that the current major dispute between Canada and Spain, which is involving the whole European Community, shows dramatically that the law of the sea is a matter of crucial importance to issues of international trade, national economies, foreign affairs and national identity.

“Nor is there one single set of rules” he said. “To carry out their tasks responsibly and confidently, naval and coast guard officers and fisheries officials of coastal states and other government officials have to have clear guidance as well as a full understanding of the powers and responsibilities of their countries as they relate to their own territorial sea zones, to neighbouring zones, to exclusive economic zones, to the continental shelf and to the high seas. We segment our courses so that we can help participants look at the special considerations for each of these contexts.”

The Centre for Maritime Policy’s courses are designed for people who have ongoing responsibilities and for whom it would be difficult to take a long period of time away from their ordinary duties in order to study these complex issues in a single course. The structure of the courses is modular and sequential, enabling the Centre to tailor the course delivery schedules to the needs of the participants.

The first module, Law of the Sea, provides an understanding of the underlying principles of the Law of the Sea. A more detailed understanding of legal principles, and the rights and obligations of countries, is developed through the course on Exclusive Economic Zone Management. In the module on Maritime Enforcement, participants gain a thorough understanding of the powers and responsibilities of a coastal state in the various maritime zones.

The Centre is planning further short courses for August-September 1995. The popular Law of the Sea courses will be repeated and additional courses will be offered in: Maritime Law and Policy and Maritime Policy for Coastal Zone Managers.

Further information: Sam Bateman (042) 268915

Indian Ocean Cooperation

The Centre for Maritime Policy is undertaking consultancy work for the Department of Foreign Affairs and Trade on cooperation in the Indian Ocean region. This involves the production of resource papers on ‘Possible Areas of Initial Cooperation’ and ‘Cooperation on Non-Military Threats to Security’. The work is part of a larger project leading to new Australian initiatives for cooperation among Indian Ocean littoral and inland countries.

Australia has been at the forefront of the new thinking on cooperative economic and security frameworks that underlie the establishment of APEC and the ASEAN Regional Forum, and the lessons Australia has learnt from its regional diplomacy in the Asia Pacific will be relevant to an assessment of whether and how best to advance a regional approach in the Indian Ocean on issues of interest to Australia. The emergence of South Africa as a potential partner both politically and economically, the radical economic reforms in India, the increasing economic liberalisation generally in the South Asian economies, and the changed security concerns in the Indian Ocean following the end of the cold war offer Australia a unique opportunity to focus on the Indian Ocean to explore regional diplomacy based on its experience in the Asia Pacific Region.

The papers produced by the Centre for Maritime Policy will provide the basis of presentations and discussions at a major Indian Ocean conference to be hosted by Australia in Perth in June.

Further information: Sam Bateman (042) 268915

• From page 1 would like to migrate to another country, rather than return home. For undergraduates, the most popular course is the Bachelor of Business Administration (BBA), which was approved by the University Council last year and which we are offering completely here in Dubai. The BBA is an extension of the Bachelor of Commerce (BCom). Whereas the BCom takes the student into specialising, for example in accountancy or management or marketing, the BBA is a more generalist qualification.

The BBA draws its subjects from the regular subjects offered by the various Commerce departments, and it provides a way of being able to offer students here a complete degree which is attractive in terms of their likely career paths.

I understand that when the Institute was set up, it was seen by some as being essentially a feeder into Wollongong, to provide courses partly in Dubai and partly in Wollongong and thus reduce the cost and time factor of being in Australia for the whole period of a degree course. Is that still your idea? Yes, that was a basic aim and we have achieved a certain amount of success in implementing it. We already have twelve students from the Institute completing their degrees in Australia, with more to arrive in Wollongong in
HIGH TECH FOR LOW ORBIT: ITC's ADVANCED RESEARCH ON SPEECH TECHNOLOGY AND MOBILE PHONES

Telecommunications researchers at ITC are helping to implement a twenty first century global mobile communications system, Inmarsat-P, also known as Project 21.

ITC's research forms a small but significant part of a $2.6 billion, worldwide scheme of the international maritime satellite organisation, Inmarsat, to deliver a global mobile voice, paging, fax and data service for handheld terminals, by the year 2000. These mobile "phones" - in effect mobile offices - will have global coverage due to a low earth orbiting satellite constellation, linked to a world-wide network of ground stations.

The research currently being undertaken within ITC as part of Project 21 involves the development of leading edge speech technology associated with mobile phones. The project is a collaborative venture between the ITC, the University of Wollongong and the University of South Australia.

More specifically, ITC researchers are working on the development of a speech compression technology which preserves high quality speech output at a very low data rate. This will in turn allow better use of the satellite's available bandwidth and power resources.

Further information:
Peter McNamara (042) 268884; P.Mcnamara@uow.edu.au

• Pictured above Mr Bruce Elder, Course Coordinator, Mr Jim Langridge, Managing Director of ITC, and five of the seven participants: Mr Kapil Sharma, Mr Shaligram Mishra, Mr Madhu Acharya, Mr Govinda Adhikary, Mr Jagat Khadka.

Developing Human Resources for the Kingdom at the Top of the World

ITC recently provided a specially tailored eight week course in human resource development (HRD) for seven senior government officers from the Kingdom of Nepal. The course balanced a four week academic program with a four week, Australia-wide observation tour.

Developed to meet the specific requirements of the Nepalese Government, the course was aimed firstly at providing the participants with a comprehensive understanding of the broad principles of human resource development and management. This first aim was to be met primarily through an academic, lecture-based program held at ITC's Wollongong headquarters.

The second aim of the program was to provide the opportunity to gain a comparative overview. This was achieved through meetings with human resource development officers in the University of Wollongong and other tertiary institutions, as well as in government departments and the private sector.

The Australia-wide observation tour was hosted, in turn, by Griffith University; La Trobe University; University of Tasmania; University of South Australia; and the University of Western Sydney.

Following the observation tour, the participants returned to Wollongong for the final sessions of the course, including a review of the experiences of the previous eight weeks.

Further information: Ann Webb (042) 268 952 or A.Webb@uow.edu.au

July. But we have listened to our potential students and we became aware that there were still an awful lot of people who were saying they were not going to be able to get to Australia. For some, it is clear that unless we can provide a whole degree program here we will not get them to enrol. This is particularly the case for young Asian and Arabic women. The BBA is meeting a real local need. We first offered the BBA in September last year and had an immediate positive response - that offering alone brought in another 25-30 students.

Just going back to that point about the young women. You see the Institute as filling a real need in providing them with a practical avenue to obtaining these professional qualifications?

Yes, that's right, although the proportion of males to females is still about 2 to 1. I understand that expatriates form the main market group. Are there any UAE nationals doing these degree courses?

Not many. There are one or two. But you need to understand that the nationals have a range of options open to them. They can go to the UAE university here, where - except for medicine and engineering - everything is done in Arabic. Alternatively they can attend the UAE Higher Colleges of Technology - which are a bit like our TAFE colleges except they don't provide a degree. And I should mention that they are completely free. The UAE does as much as it can to encourage its people to get as much education as they can.

In most cases, if nationals want an international qualification, they can go to the USA or Europe. There are of course some of those for whom there is a cost barrier to doing that, but they probably haven't had an English medium education.

Does that mean there is an actual or potential demand for foundation studies and English language courses?

The situation is different for each. We have excellent demand for English language courses. But one of the biggest challenges we have here is in promoting the Foundation Studies Program. Many students see it as some sort of unnecessary burden or a penalty. They say "I've finished high school. Why do I have to do another year?"

There's been a real resistance to foundation studies, so we have been working on presenting it differently. That is why we have re-named it the UEC - University Entrance Certificate, which is essentially what it is.

And is that working?

It's a bit early to say. There is still a bit of an idea that it is somehow a remedial program. But we do have a responsibility to prepare students for the realities of study in an Australian university. A number of our students come from education systems where essentially they are expected to take notes, study the text book and then reproduce the material in the exam. As anyone who knows how Australian and other universities in the western tradition work, that sort of system is not likely to prepare people for international study.

Foundation studies is to a significant extent a course to introduce people into a different culture of learning and teaching. On the Wollongong campus it is probably easier for students to get into the way of critical thinking and questioning typical of the Australian approach to university study. There they are studying with a lot of Australians and also with Americans and Europeans, who understand the critical approach and don't see it as disrespectful.

That must be hard to explain in Dubai, where presumably most of the students are coming from different traditions or cultures from the Australian culture - even though ours is increasingly a multicultural society.

Yes, and it is difficult to find the words to explain that without sounding culturally insensitive or condescending. But the fact is - and I explain this as well as I can - the approaches valued in their education systems are not necessarily what's being looked for in
ours. In other words, if they want to gain an Australian qualification, or for that matter an American, or English or other European one, they need to understand how the system works and be able to adapt to it.

**Do they accept that when you explain it?**

To an extent, but there are still students who want to know how we expect them to remember everything in the "text book for the course" - when in fact we don't expect them to do so. They also want to know why the lecturer isn't going through the text book in fine detail. So we have a challenge in encouraging them to do a lot of self-directed study and reading around the subject outside the "text books" and the round of lectures.

We have to work at helping students understand that when they come to tutorials or lectures they need to be prepared to be asked to think and to be asked for an opinion.

**That is obviously an important challenge to meet, if you are going to provide an education which reflects the way things work internationally. It must be a fascinating thing to be providing, in Dubai, this Australian-generated education system which calls on the English, European and US traditions. And I guess that in fact you are actually working with people from a number of cultures, not just one?**

Yes. Our students are from a range of cultures - Indian, Pakistani, Iranian, Lebanese, Syrian. There are also a few Europeans - one English, a couple of Bosnians. And they all come from different education systems. So, like the International Office of the University, we have to do a lot of work to sort out qualifications: the Central All India Senior School Certificate, the Indian School Certificate, the US Scholastic Achievement Test (SAT 1), British A-levels and O-levels and so on.

**So how do you see the future of Foundation Studies?**

I am quite sure the Foundation Studies Program will really take off as the degree program becomes more popular and when there is a critical mass of students who have been to Wollongong and who can then spread the word about the value of pre-university preparation.

**Are most of your staff locally engaged?**

No. We have a number of employers who sponsor their employees to study with us - as private students, as distinct from contracting with us to provide corporate classes.

**How many students do you have for English language and what proportion of them would be UAE nationals?**

There are a number of employers who sponsor their employees to study with us - as private students, as distinct from contracting with us to provide corporate classes.

**What are some of the other points you would like to add to the academic calendar of the Wollongong campus works for you?**

It is not ideal, but we have to fit in with it, so we are working out the best way to synchronise. We need to be able to start an intake in September, at the commencement of the local academic year. Then we can finish in June, so that those who are going to Wollongong can commence there in July, at the beginning of Spring Session.

We have looked at having a couple of other arrangements, one tying in with the Wollongong Autumn session (commencing February) but we haven't been able to get that going. There's not the demand.

But we have initiated an intake in late April to cater for Indian expatriates who have done the Indian Board exams, which finish in late March. They would then normally have to wait until September before commencing university study. But we can offer them an early start. Nine students last year did that, enough to make it worthwhile. We expect considerably more this year.

We work continually at being flexible and adapting our schedules to meet the practical circumstances of the place and the students' needs. That's a challenge, but we believe it goes with being genuinely international.

**Are there any other points you would like to cover?**

No, I think that's about enough for now. But I would appreciate getting a fax of the weekend AFL scores.

**That will be done. Thank you Martin.**

Martin van Run comes from Melbourne. He has had extensive Australian and international experience in language teaching, teacher training and educational administration.

Administrative and marketing support for the Institute is provided by the Illawarra Technology Corporation and is managed by Bill McGaw, ITC's Manager International.

For further information, contact Bill McGaw (042 268999) <W.McGaw@uow.edu.au>
Further expansion for Sutherland bus service

In response to customer feedback from a recent survey, Dion’s Bus service has introduced some changes and additional services to cater for the needs of university students. Two new services will operate; one arriving at the University at 2.20pm and another departing from the University at 6.45pm.

In addition, the morning services will arrive slightly earlier to avoid delays in the peak traffic period and extra buses has been allocated to the morning service to eliminate students having to stand.

DION’S BUS SERVICE
SUTHERLAND SERVICE TIMETABLE

WOLLONGONG TO SUTHERLAND

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<th>Wollongong University</th>
<th>Fairy Meadow P.O</th>
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X = PICKING UP AT WOLLONGONG UNIVERSITY TO SUTHERLAND
US = OPERATES SEMESTER PERIODS ONLY

SUTHERLAND TO WOLLONGONG

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B = BUS TRAVELS TO WOLLONGONG UNIVERSITY VIA MT OUSLEY RD AND ON TO WOLLONGONG
D = BUS TRAVELS TO WOLLONGONG VIA BULLI PASS

FARES
ADULT = $4.00           PASSENGER CARD = $3.60
CONCESSION = $3.00      PASSENGER CARD = $2.70

STARTING DATE: MONDAY 10 APRIL 1995

FOR MORE INFORMATION REGARDING THIS SERVICE, PLEASE PHONE (042) 289860 DURING OFFICE HOURS.
Visitor from the Fifth Dimension

Dr Irina Verenikina, a Senior Fellow of the Russian Academy of Sciences, is visiting the University of Wollongong.

She is working with Mr Ted Gould in the Department of Business Systems.

Dr Verenikina is a telecommunications specialist within the Academy's Institute of Psychology.

She advises Russian social scientists on mediated communications and carries out joint research activity with co-workers in the United States on a project called the Fifth Dimension.

Mr Gould has been working on predicting the demography of Australian schools, trying to estimate the numbers of children for different areas who will need school facilities in the future.

This is obviously essential information for planners and politicians.

However, predicting these kinds of dynamics involves working with huge numbers of variables and is very complex. Trying to depict or map these variables is also difficult.

Mr Gould's research led him to Activity Theory, a way of setting up mechanisms for predicting the activities of people.

For some reason, Australia has not got very involved in this area of research, but it was first outlined in Russia in the 1930s, and is used extensively there.

'Activity Theory is gaining popularity in Europe,' Mr Gould said.

'When I started to find out more about it, I corresponded via e-mail with Irina who is an expert in this area.'

Dr Verenikina said that predicting populations for small areas, such as a local school, is inherently difficult, particularly if the population is relatively mobile.

'Activity theory provides a basis for designing an interface between a computer model and the modeller, which allows us to use human intuition to balance the model,' she said.

'Using Activity Theory, the interface is more user-friendly, and can be used to predict which tools the user needs to make the program work.'

Dr Verenikina is also part of the Fifth Dimension.

This is a joint Russian/US telecommunications project for children.

A small group of Russian kids have a computer club.

After school, they come to the Institute of Psychology in Moscow and become familiar with using personal computers and sending e-mail.

'The children send mail to the Electronic Wizard, who they see as a person they can talk to, and tell secrets to,' Dr Verenikina said.

'Of course, the Wizard is not a real person, but the children enjoy this.

'This electronic form of communication is halfway between spoken and written communication, and is a good way for the children to become comfortable with new technology.

'They can also communicate with children in the US.'

The Fifth Dimension is a collaborative project with Professor Michael Cole and his team at the University of California, San Diego.

'Even while I'm in Australia, I'm continuing to work on this project via e-mail,' Dr Verenikina said.

'In the US, most states have computer clubs for children, and organise projects jointly between universities, the communities, and children's groups.

'I would like to extend the Fifth Dimension project within Russia.'

Dr Verenikina can be contacted via Mr Gould in Business Systems, ext. 3755.
Tertiary teaching course now mandatory

On April 3 a ceremony was held to acknowledge the successful completion of the Spring 1994 Introduction to Tertiary Teaching (ITT) course by staff of the University.

Certificates of Completion were awarded to 26 participants from 16 different departments at a luncheon in the McKinnon Building.

Participants were congratulated by the Dean of Education, Associate Professor John Patterson, and the Acting Head of the Centre for Staff Development, Ms Sylvia Huntley-Moore.

The graduating group included 18 academics whose participation in the course was mandated under a University policy which requires new appointees to complete the program.

It also contained two Faculty Librarians and three part-time tutors.

The function, organised by course coordinator Dr Max Gillett (Education) was attended by 17 graduates from the Spring course and three colleagues who had acted as support persons in the teaching development component of the course; Dr Lawrie Schafe (Business Systems), Ms Trish Vezgoff (Sociology) and Dr Tony Hulbert (Biological Science).

The ITT course is available free to all academic and suitably qualified non-academic staff of the University.

It is conducted each session through the cooperation of the Faculty of Education and the Centre for Staff Development and may be taken on Wednesday afternoons or Thursday mornings.

For more information about the course staff may contact either Dr Max Gillett, ext. 4277, or Ms Liz Ellis, ext. 4101.

Staff who successfully completed the course in Spring session 1994 were:

Dr Irene Kreiss and Mr Boris Gazibarich (Public Health and Nutrition); Dr Rodney Vickers (Physics); Dr Chris Everingham and Ms Cath Murphy (Sociology); Dr Tony Webber (Economics); Dr Joanne Jamie (Chemistry); Mr Daniel Yeung and Ms Josephine Batty (Accountancy); Dr Lee Astheimer and Dr Paul Else (Biomedical Science); Dr Will Rifkin and Ms Frances Laneyrie (Management); Ms Jeanne Wong and Mr Peter Hyland (Business Systems); Dr Louise Ravelli, Dr Melissa Hardie and Ms Karen Brooks (English); Dr Mark Wilson (Biological Sciences); Ms Chris Faricy and Ms Susan Jones (Library); Dr Zheng Li (Electrical and Computer Engineering); Dr Bala Balachandran (Computer Science); Dr Steve Roodenrys and Mr Peter Caputi (Psychology); and Dr Frances Dyson (Creative Arts).
The Rig starts tonight

The Faculty of Creative Arts is presenting an exciting new piece of theatre in the Performance Space (Building 25) from 26-29 April.

Written and directed by Creative Arts Honours student Adam Kronenberg, the show combines first year and graduating third year actors.

'The Rig' received an award at the 1994 National Young Playwrights Competition, and promises to be breathtaking.

Some of the actors have been training for 18 months on specific skills such as trapeze and acrobatics required for this extremely physical form of entertainment.

'The Rig' deals with many layers of potentially disastrous situations, such as deportation of immigrants, racism, sexism, and industrial malpractices.

Come along and see if your imagination can match the audacity of 'The Rig' in the Performance Space Building 24, 8pm $16/$8 concession.

Postgraduate works at the Long Gallery

Marilyn Walters  Binghui Huangfu
Enis Tan  Ron Stewart

Until 28 April

This exhibition which was opened by Dr Sue Rowley, Director of Postgraduate Studies, on Thursday 30 March, shows works in progress by students enrolled in Honours, Master of Creative Arts and Doctorate of Creative Arts.

Marilyn Walters in her artist statement about her body of work, called In a grain of sand, states that 'the works in this exhibition present the confrontation between human consciousness and the natural world...' One way of doing this is the subversion of scale. The result of this is a series of tiny landscapes which invite the viewer to come closer to examine the seductive surface of these small collages.

Binghui Huangfu, a Chinese artist with a background in filmmaking, design and sculpture, is working on a larger scale and again the surface of the paintings in the series Towards a Fusion is full of interest - the layering of marks and images, plus text make these read in a number of different ways.

Enis Tan from Turkey, is showing traditional shadow puppets made from hand painted leather and used for many hundreds of years to entertain the people in towns and villages throughout Turkey.

Ron Stewart's etchings and block prints, reflect his studies of Japanese culture and enjoyment of simplicity of line.

Gallery hours 9-4pm Monday-Friday, 1.30-4pm Sundays.
Enquiries: (042) 213 996.
Treat for Creative Arts students

Theatre students in Creative Arts had a rare experience recently when they were treated to a workshop by a famous name in British theatre, Joan Littlewood.

Ms Littlewood was visiting Australia and kindly agreed to talk to the students during an informal visit to the University.

Renowned for her unconventional and iconoclastic ideas, Ms Littlewood stimulated the students and staff with some insight into her approach to the theatre.

Dissatisfied with the establishment theatre, Ms Littlewood founded a company in Manchester in 1945 called Theatre Workshop which she devoted to the presentation of plays which had some relevance to contemporary social or political issues.

She later developed the company as an ensemble which could create new plays as well as fresh interpretations of stage classics.

In 1953 the Theatre Workshop was moved to the Theatre Royal at Stafford East in London.

Ms Littlewood's work made this theatre famous.

Based on her methods of directing through improvisation and miming to music, Theatre Workshop developed a remarkably successful play about the First World War, *Oh, what a lovely war*.

The play was made into a film in 1969.

Joan Littlewood with the Director of the theatre strand, Ian McGrath, and lecturer in theatre, Jeff Kevin, enjoying her visit.
Union Activities
All members of the Union, students and staff are invited to attend.
27 April: Band Competition Heat 1, Uni Tavern.
1 May: SRC forum on the lawn, ‘Can Conflicting Cultures Exist as a Multicultural Society?’
2 May: Violinist at lunch, Food for Thought, clubs and societies lunchtime performances on the lawn - arts, crafts, music and more
3 May: Lunchtime entertainment - The World's Klang
4 May: All day - Market Day, Overseas Student Fellowship performing on the lawn. Evening - Asante, Zulu African music in the Uni Tavern, free.
5 May: Evening - UniMovies 'Eat, Drink, Man, Woman'
11 May: Band Competition Heat 2, Uni Tavern.
25 May: Band Competition Heat 3, Uni Tavern.
27 July: Band Competition Final.
7 August: Union Art Award.
4-8 September: Union Week.
8 September: Union Dinner.

General
The Campus Alumni Bookshop will open on the second and fourth weekends of each month. Come and browse through a wide selection of preloved textbooks and fiction. Campus East, Cowper Street, Fairy Meadow (opposite Science Centre). All proceeds directed towards Campus projects. Donations of material are invited. Enquiries to Alumni Office, phone 213 249 or 291 951 (anytime).
2 May: Australian Federation of University Women meeting 7.30pm. Guest speaker Meredith Hutton, Historical Archaeologist and Heritage Consultant. Postgraduate Resource Centre, 49 Northfields Ave. Enquiries Carol Raynor, phone (042) 855 300.

Faculty of Creative Arts
Until 30 April: The Rig. Playwright and Director Adam Kronenberg, Honours Student. Third year actors. Performance Space (Bld 24). 8pm. Admission $16 - Conc. $8.

Long Gallery
Exhibition program for 1995:
Until 28 April: Postgraduate Show - Marilyn Walters, Binghui Huangfu, Enis Tan, Ron Stewart - Prints.
4 May-28 May: Print Show - 5 School Exchange Portfolio. University of Wollongong; University of Florida, Gainsville; West Virginia University; Indiana University; Purdue School of the Museum of Fine Arts, Boston. Cambodian Textiles from the collection of Neil Manton. Monoprints: Jane Hall.
29 June-30 July: NAIDOC Exhibition - Works by Aboriginal artists.
3-27 August: Artist Made Furniture.
13 November-10 December: BCA Graduating Exhibition.

Sports Psychology lectures
Two visitors, prominent in the field of Sports Psychology, will be giving guest lectures during May.
Professor Robert Weinberg, from the Department of Physical Education, Health and Sport Studies at Miami University Oxford, Ohio, will talk about Goal Setting in Sport and Exercise: Findings, Issues and Applications.
His talk will be on Tuesday 9 May from 12.30-1.30pm in room 19.1056. The 1995 Australian Sport Psychology Scholar Award Recipient, Robin S. Vealey, also from Miami University, will speak on Beyond Epistemological Dualism in Sports Psychology Research.
This talk will be on Tuesday, 16 May, 12.30-1.25pm in room 19.1056.

What's On
2 May: SRC forum on the lawn, ‘Can Conflicting Cultures Exist as a Multicultural Society?’
2 May: Violinist at lunch, Food for Thought, clubs and societies lunchtime performances on the lawn - arts, crafts, music and more.
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8 September: Union Dinner.

Stop Press
Cyclists
Can you be seen at dusk or night?
You can see other road users
BUT can they see you
FREE reflective tape will be left with your bike from May 1-4
Get more information on bike safety on May 4
Market Day
Be Safe Be Seen
Supported by Healthy Cities Illawarra and the University