

The University of
Wollongong



Calendar 1983

Volume V
Annual Report 1982

The University of Wollongong



Calendar 1983

ARMS OF THE UNIVERSITY

The principal elements incorporated in the arms of the University are the blue of the sea, the gold of the sand and the red of the Illawarra flame tree. The open book often used for educational institutions has also been included.

The blazon is: "Azure an open book proper bound gold on a chief wavy or three cinquefoils gules."

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The University of Wollongong Calendar 1983

There are 6 volumes of the Calendar:

The University of Wollongong Calendar 1983 Volume I
Legislation

The University of Wollongong Calendar 1983 Volume II
Faculties Sector
Undergraduate Handbook

The University of Wollongong Calendar 1983 Volume III
Institute Sector Handbook

The University of Wollongong Calendar 1983 Volume IV
Faculties Sector
Postgraduate Handbook

The University of Wollongong Calendar 1983 Volume V
Annual Report - 1982

The University of Wollongong Calendar 1983 Volume VI
Statistics Report

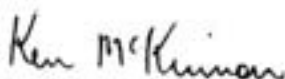
THE UNIVERSITY OF WOLLONGONG

The Honourable R.J. Mulock, M.P., Minister for Education

In accordance with section 34 of the University of Wollongong Act 1972, the Council of the University has the honour to present to you the Annual Report of the proceedings of the University for the period 1st January to 31st December, 1982.



Chancellor



Vice-Chancellor

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THE VICE - CHANCELLOR'S STATEMENT

1982 was the first year of a new triennium, a triennium in which the University was expected to increase its enrolments. It was also the year in which amalgamation with the Wollongong Institute of Education was formalised. Faced with the problem of coping with a period of severe limitations on resources, the University had to adopt new budget strategies so as to keep the budget within a minimum deficit. With the introduction of prospective funding arrangements, it was also necessary to make sufficient provision for non-supplementation of wages and salary increases. The resource situation was aggravated by the lack of capital assistance for buildings and the fact that the cost of amalgamation had to be met from existing resources.

Although it was a difficult year, the University continued with its development of new courses and academic programmes; research policy was reviewed with a view to concentration of effort without damaging the fundamental research undertaken by individual staff. The University's research efforts in 1982 are detailed later in this report with the University continually encouraging support for research associated with technological change. This is seen as particularly important for the future prosperity of the Illawarra region.

The changed situation called for improvement in the University's planning mechanism. To this end, the Planning and Development Committee was established and other committees either reconstituted or rationalised. Several reviews of activities were completed; for example, the review of the Centre for Multicultural Studies was completed and Council's response to the review was to strengthen the activities in this area.

The necessary consequences of amalgamation were proceeded with while these academic and research activities continued. The June meeting of the Council was the first such meeting where the Council of the former Wollongong Institute of Education and the University met as the University Council. In December a newly elected Council met for the first time. The latter Council was larger than the "pre-amalgamation" Council of the University. An Interim Committee Structure for the academic governance of the University was also established. A single set of admission and matriculation regulations covering degree programmes in the University was approved. There was also established a single Academic Review Committee to deal with student matters from both the Institute and the Faculty sector. At the end of the year there still remains a lot to be done, but our achievements have been quite substantial.

The Council of the University also recognised its special role of bringing an awareness of public issues to the University. In August a Working Party was established to review equal opportunity within the University. The Working Party was requested to review policy and propose measures which will promote more equal opportunities at the University. The Working Party's task is specifically to collate and monitor full statistical and other information relevant to the status of women within the University with a view to raising awareness of university staff and promoting the concept of sexual equality. It aimed at encouraging representation of women on key university committees especially those concerned with appointment, tenure, promotion and research grants. It also aimed at developing measures for counteracting the career disruption and disadvantages experienced by women involved in child bearing and raising and finally to develop measures aimed at enhancing the career prospects for women generally. The Working Party is looking at both academic staff and general staff areas and first met in November, 1982.

The Working Party has collected some statistical information but is also committed to looking at attitudes to equal opportunity to understand the level of awareness within the University. Council also accepted a broad policy statement in order to cope with difficulties faced by many persons intending to undertake university studies. Council decided to give child care a high priority and 'Kid's Uni' was given further encouragement and support.

The Illawarra Region's concerns were shared by the University, which in its own way, attempted to contribute to a better understanding of those problems and resolution of the more difficult issues. In keeping with this approach, the

University celebrated University Day on 13th August, 1982, the anniversary of the first meeting of the Chancellor's Council in 1975. The successful series of lectures which have been given to mark this occasion was continued. The theme of the evening's talk was "The Future of Wollongong". Several speakers participated including Mr. J. Clark, General Manager, Australian Iron and Steel, Mr M. Booth, General Manager of Metal Manufacturers Ltd and Mr. G. Roberts, President of the Port Kembla and South Coast Branch of the Federated Ironworker's Association. A panel discussion involving all three speakers followed.

Friends of the University developed further, with its research consulting showing a substantial increase over its first year of operation. In addition, the University as in previous years, ran a successful Schools' Day to assist over 800 senior high school students in making their choices about tertiary education. The University's community interests go beyond this region. Its staff have been involved in state, national and international ventures.

In conclusion, I would like to thank the staff of the University and the Institute and the members of the previous two Councils of the institutions for their support in bringing about the achievement of amalgamation in 1982 to produce a University unique in the state. Throughout the nation, the Wollongong experience is being watched with interest as we continue to progress in the fields of teaching, scholarships and research and provide direction and leadership in difficult economic times.

Ken McKinnon,
Vice-Chancellor.

ACADEMIC ACTIVITIES

FACULTY OF COMMERCE

ACCOUNTANCY

As a consequence of the increased enrolment at 100 level in 1981 the student load of the Department continued to grow, increasing to 270 EFTS at 30th April, 1982. Overall the pass rates appear satisfactory. The Department has come to accept that, given the profile of our first year students, there is limited scope for improving pass rates further. An attrition rate of 8.7 is obviously high in relation to the University's average of 3.8 and that for the Commerce Faculty of 2.9. The Department has examined this attrition rate closely and has to accept a pass rate of between 55 and 60% for the 100 level students. In 1982 it was, in fact, at the top of the range.

Nearly all graduates, apart from those continuing with study, have obtained employment.

The Department participated in the University's Year 12-Introduction Day. Copies of a special edition of the Departmental Handbook were made available to students and were later forwarded to school principals and careers advisors.

ECONOMICS

In many respects 1982 was one of the most successful years in the history of the Department. Enrolments increased by over 13 per cent to reach record levels. The Department grew nearly twice as fast as the University and accounted for 7.9 per cent of total University enrolments.

The overall pass rate for the Department was near the average for both the Faculty of Commerce and the University. The Department's attrition rates were well below those of the Faculty and the University for all subject levels. This may be a reflection of the fact that students seem to be reasonably content with the Department's offerings and teaching methods. The Department also offers special remedial lectures and allocates tutorials according to students' background and predicted success.

The Department organised and hosted a H.S.C. Economics Conference for high school students preparing for their examination. The Conference attracted 135 students from 14 high schools. It is anticipated the conference will be repeated annually. The Department also participated in Year 12-Introduction Day by providing a film followed by a discussion on Economics as a discipline. The Department's curriculum and teaching philosophy was also explained.

A plan to increase the number of higher degree students was initiated in 1982. This included the preparation and world-wide distribution of a handbook describing the Department's Postgraduate Programme in Development Economics.

Research Theses in Progress

PhD

- Tax progressivity in Australia.
- The investment decision in changing industrial conditions.
- The impact of education on agricultural productivity in developing nations.
- An empirical study of the building industry.
- The choice between bus and car in Wollongong.

MCom

- Sugar cane as an energy source.
- An enquiry into factors affecting the extraction rate in coal mining.
- The political economy of government expenditure.
- Mining and economic development.

FACULTY OF ENGINEERING

CIVIL AND MINING ENGINEERING

There were no major course changes during the year, however several subjects were renamed, amalgamated or revised.

Attrition rates are considered satisfactory. Students undertaking degree courses in Civil and Mining Engineering are required to pass 57 subjects during the course. Students can proceed by passing by subject and not by year, therefore individual pass rates bear little consequence. However, for the total enrolments in all undergraduate subjects a pass rate of 81.7 per cent was obtained.

Equipment

Major equipment purchases during the year included the following:

- Concrete laboratory equipment.
- Vibration testing equipment.
- Mining laboratory equipment.
- Sound measuring equipment.
- Photogrammetry equipment.
- Computing equipment.

Research Theses in Progress**PhD**

- A technique to resolve road accident problems.
- Progressive failure in slope stability analysis.
- Foundation and earthwork evaluation.
- Analysis of excavated slopes - multi-stage finite element approach.
- An analysis of road traffic noise - Illawarra Region of N.S.W.
- Hydrodynamic forces on off-shore structures by laboratory study and numerical method.
- The development of physical models and their application to the prediction of strata behaviour near mine openings.
- Subsidence and strata control in the Sydney coal basin.
- Analysis of urban transport system.
- Non-linear analysis of box-type structures.
- Behaviour of cracked concrete multi-cellular bridges under repeated loading.

ME

- Urban drainage systems.
- Stability of slopes in open cut mines.
- Computer simulation of rock extractions.
- Time variable rainfall-runoff modelling.
- Experimental determination of head losses in stormwater drainage systems.
- Methane drainage in long wall mining.
- Comparison of design procedures for single flood detention basins.
- Noise characteristics on roads.
- Gas removal prior to mining.
- Longwall shearer picks.
- A study of some structural vibration problems.
- Earthquake energy absorbers.
- Re-use of industrial and domestic wastewater.
- Investigation of the load-bearing capacity of externally clad and reinforced concrete slabs.
- Hydraulics of road culverts.
- Coalwaste in road construction.
- Delays at railway level-crossings.

ELECTRICAL AND COMPUTER ENGINEERING

Enrolment numbers in the two new courses which were introduced in 1982 and which lead respectively to a Bachelor of Engineering in Computer Engineering and to a joint Bachelor of Mathematics/Bachelor of Engineering in Electrical Engineering have been gratifying. The first year of all courses offered by the Department is identical but about 20 of the 85 first year students have indicated their intention of taking the Computer Engineering strand while another 6 will undertake the joint degree.

Facilities

A partial response to requests for additional space resulted in the erection of a demountable building, where up to 12 fourth year students may have individual benches for the completion of their fourth year projects. The new building includes a periodicals library, blackboard, noticeboard and amenities.

Research Theses in Progress

PhD

Realisation of null steering antenna.
Single frame cascade induction machines: analysis and design.
Twin rotor disc type induction machines.

ME

Glider control and supervisory equipment.
Power transistor-switching devices.
Investigation of microwave holography.
A computer controlled infra-red sensing system.
Automatic adaptive drafting programme for a universal slabbing mill.
Electrical characteristics of a pilot scale electrostatic precipitator.
Photographic measurements of stratospheric aerosols.
A study of harmonic generation by and fault occurrence in static converters.
High bit rate microwave data linker.
Effect of time delays on control system stability.

MECHANICAL ENGINEERING

There were no fundamental changes in the direction or structure of the Department's teaching programme. The following subjects were presented for the first time in 1982, Coal Technology I and II, Professional Orientation and Coal Energy Technology I and II.

The Department in association with the Illawarra Regional Committee of the Water Research Foundation of Australia conducted an essay competition for Year II students in high schools in the Illawarra and Shoalhaven Regions. Several schools were visited by the Department and the prize winners visited the University.

Equipment

Major equipment purchases during the year included the following:

Sieve shaker.
Graphics boards.
Air compressor.
Noise dose meter.
Portable Terminal plus Bubble Memory.
Model V12 profile projector.
Tasman Mini Data Logger.
Pressure transducers.
Hard copy unit plus 8 pen retrofit kit.
Thermocouple meters.
Coulter microprocessor particle size analyser.
Digital cartridge tape recorder.

Vibrometers.
 Pyc eddy current drive motor.
 Beam splitter, rotating mount for beam splitter and beam expander.
 Splitter and beam expander.
 Oval pet valves and mechanical counters.
 Photo-multipliers and Gencom resistor network.
 Model 1980 B Counter system, 9117 focussing lens and beam spacer.
 Phase indicator.

Research Theses in Progress

PhD

Flow properties of bulk solids.
 The optimum design of spur and helical gears to BS 436.
 Pneumatic conveying of pulverized bulk solids.
 On self-tuning regulators.
 The studies of flow separation in aerodynamics.
 Department of numerical techniques for two-dimensional fluid flow with flexible boundary.

ME

The application of finite element analysis to problems of multi-dimensional heat conduction with non-linear boundary conditions.
 Fabric filters for air pollution control.
 The edge effects of hot-dip metallic coatings on steel strip.
 Factors affecting the recovery of benzene from coke oven gas.
 The design and performance of gravitational thickeners and clarifiers.
 The prediction of bin wall loaders.
 A comparison of non-linear and linear models of a steam generator.
 Vibrational problems.
 A theoretical study of the tension levelling process.
 Computer aided gear design to the new Australian code.

METALLURGY

In 1982 there was a substantial transfer of part-time students to full-time courses. The present uncertain situation of the local steel industry, on which the Department is dependent, means that future levels of enrolments are difficult to predict and it may be necessary for the Department to develop a flexible and innovative attitude to its courses in the future. The highlight of 1982 was the visit by Professor Tsun Ko of the People's Republic of China. It is expected that the Department will be able to develop this contact by later visits of members of staff to the People's Republic of China.

Research Theses in Progress

PhD

Thermo-mechanical processing of high strength low alloy steels.
 Thermo-mechanical processing of ti-bearing high strength low alloy steels.
 On-line dynamic analysis of the blast furnace process.
 Segregation in packed beds.
 Fatigue of ferrous alloys.

ME

Effects of increased bed height and suction of sintering.
 Structural transformations in Niobium, Titanium high strength low alloy steels.
 Some aspects of metal forming operations.
 Structural and kinetic aspects of phase transformation in a duplex stainless steel.
 Shape memory effect in iron alloys.
 Spot welding.

Environmental cracking in natural waters and its prevention by inhibitor addition.

The mechanical behaviour of copper alloys.

Structural aspects of high strength low alloy steels.

Deformation and recrystallization in a duplex stainless steel.

Mechanical behaviour of sheet metals.

FACULTY OF HUMANITIES

ENGLISH LANGUAGE

In 1982 the Department of English was disestablished by Council and two new Departments of English Language and of English Literature and Drama were set up.

It was felt that English Language students should have an opportunity to take their study of Modern English further and this resulted in the introduction of the courses, English Language and Linguistics A and B, both of which contain Modern English strands.

The new department attracted higher enrolments than the language section of the former Department of English.

The Department participated in the Year 12 - Introduction Day as well as contacting local schools giving information about the Department's discipline and courses.

Research Theses in Progress

MA

The role of the host in Chaucer's Canterbury Tales.
 Australianisms in the novels of Thomas Kenneally.
 Relationship between young and old in Old English poetry.

ENGLISH LITERATURE AND DRAMA

The Department of English Literature and Drama provides two strands of study for students: in English Literature and in Drama.

The English Literature strand includes courses in sixteenth, seventeenth, eighteenth and nineteenth century English literature as well as courses in Utopian and anti-Utopian Literature, Australian Literature and in Ballad and Lyric.

The Drama strand includes courses in Human Drama and Institutionalized Drama, as well as the study of Drama and Theatre and Modern Media.

Students wishing to take a comprehensive course of study in English Literature and Drama may draw, at the appropriate levels, not only from subjects offered within the Department but from all subjects offered at 200-level and above in the Department of English Language.

The drama courses have continued to involve both students and staff in various forms of practical activity related to their work on these courses including, for example, participation in workshops, full-scale productions and through associations with the local theatre group, Theatre South.

Research Theses in Progress

PhD

Certain Secrets: Sterne's *Momus* - Glass and the Heart of Man.
 Commitment and two modern British dramatists: Trevor Griffiths and David Hare.

MA

Disraeli's scope as a novelist.
 Literary texts set by Benjamin Britten.
 Nineteenth Century Australian women writers.
 Australian fiction of the Great Depression.
 Thea Astley: the novels.
 The dichotomy of body and soul in the poetry of George Herbert.
 Australian girls' fiction.
 The literary development of Humphrey McQueen.

EUROPEAN LANGUAGES

There were no major changes in the teaching programme of the Department during the year. The use of video tapes as a normal teaching tool has increased with frequent use of the extensive range of tapes held by the French Embassy in Canberra.

A teaching assistant provided by the Italian Government enabled the Department to introduce Italian Honours courses in 1982.

The Department participated in the Year 12 Introduction Day. Professor Leal also visited High School Principals in the area to encourage interest in foreign language study. Several other visits to schools were made by staff.

Research Theses in Progress**PhD**

The interplay and development of objective and philosophical attitudes in the study of Eastern religions in 18th Century French literature with special reference to Voltaire.

MA

Recurring themes in the narrative works of Grazia Deledda.

HISTORY

The 1981 Committee of Review of the Department recommended that it develop the teaching of history in three regional streams: European, Asian and Australian. Consequently, it was resolved to phase out the first year course in English Social History, incorporating elements of it in a new first year course on Europe 1900-1980, to be introduced in 1983. The new first year course in Australian history, Australia Before 1900, was offered for the first time in 1982.

Enrolments in 1982 were higher by about 28% overall. Much of this seemed to be due to the popularity of the new first year course in Australian history. First year enrolments rose 32% and second year enrolments no less than 62%.

Research Theses in Progress**PhD**

The first cavalry army, 1918-1920.

The attitude(s) of the Australian Trade Union movement towards the Soviet Union, 1930-1960.

The revolutionary intellectual as war leader: V.I. Lenin and Soviet Oborony, 1918-1920.

Technological change in N.S.W. coalmining, 1930-1965.

History of Clothing Trades Unionism in Australia.

Nikolai Aleksandrovich Rozhkov, 1868-1927.

Development of Illawarra Coalfield, 19th century.

Labour and politics in N.S.W., 1880-1900.

A History of the N.S.W. Teachers' Federation, c1960-1980.

An analysis of the work of Australian non-government overseas aid-giving organisations, 1945-1980.

Irish assisted immigration to N.S.W., c1830-1870.

A History of the Federated Miscellaneous Workers' Union of Australia.

History of Water Board Employees' Unions.

The Labor Party, The Labor Council and the Australian Workers' Union, N.S.W., 1917-1931.

Western Images of the Soviet Union, 1920-1930.

- British public opinion towards the United States of America between September, 1939 and December, 1941.
Women in N.S.W. politics, 1930-1980.
Images of the U.S.S.R. in the Australian media, 1917-1960.
Redundant women in the Promised Land: English middle class women's migration to Australia, 1861-1881.

HISTORY AND PHILOSOPHY OF SCIENCE

The discipline of history and philosophy of science (HPS) has undergone a considerable transformation in the past ten years. There are a number of reasons for this. Historical studies of science have been radically influenced by models developed within the sociology of knowledge. A new breed of social historians of science, trained in modern historiography, have breathed new life into the history of science. A change has occurred in the popular view of scientific knowledge and technological change, such that science is becoming less an example of objective truth and a guarantor of spiritual progress and more a source of problems and uncertain troubling knowledge; this has led to renewed interest in science and technology as cultural products. Finally, awareness of the relationship between science and the state has necessitated drawing on the concepts and methods of the economist and the political scientist.

This shift does not mean that traditional history of science and philosophy of science do not, or will not, continue to exist. They are both valid areas of intellectual inquiry, from which HPS should draw. But this new field of HPS, marked by its problem focus on the origin, nature, development and effects of science and technology, is much broader in scope, draws on a wider range of humanities and social science disciplines, and is truly interdisciplinary. Further, it provides a basis for the increasing demands on the discipline to contribute to the understanding and resolution of contemporary problems which have a scientific or technological component.

Hence, the objective of the HPS teaching programme is to develop in students an ability to recognise and dissect complex problems, to draw on the concepts and techniques of other disciplines as appropriate, with a full understanding of their strengths and limitations, and to communicate their understanding effectively. Courses have been designed to offer a strong major to students with widely varying interests in science and technology, a range of subjects related to the content and concerns of other disciplines, and an opportunity for those working in areas affected by technology to develop an expertise in dealing with it.

The Department participated in Year 12-Introduction Day, produced a library display, and presented a number of talks to teacher groups and school students. There is evidence that the strong research reputation and community involvement are serving to attract students.

Research Theses in Progress

PhD

- The plant variety rights issue.
An examination of the effects of information technology on Australian organisations.
Towards a philosophy of technology.
The role of TAFE in technological change.
Industrial policy and industrial performance.
Australian Research & Development and technology transfer.
A study of social science in action: role and limitations of contemporary research into domestic inequality.
Relationships between educational theory and practice, and technological change, 1950-1980.

MA

Evaluation of the "offset" policy.

The social effects of the introduction of computer-aided learning in school education.

The impact of technology on the employment of professional chemists.

Political decision-making in situations of technical uncertainty - the case of 2,4,5.T.

PHILOSOPHY

In 1982 requirements for graduating with a substantial and coherent study in Philosophy were made more stringent. Firstly it was decided to introduce a core pair of 300-level subjects, Epistemology and Metaphysics, which would only be available at 300-level and at least one of which would be for students undertaking a substantial and coherent study in Philosophy. Secondly, it was decided to identify certain of the existing subjects as parts of a core programme through which students who aspired to a substantial and coherent study of Philosophy at 300-level would be steered.

Enrolments, particularly at 100-level were disappointing. Only three students majored in Philosophy in 1982. It should be noted that because the Department is not training students for a particular career, the demand will inevitably be small. In general, Philosophy Departments have a broad base of 100-level students, with small enrolments of able students in the senior years.

Research Theses in Progress**PhD**

Luigi Pirandello: Existentialist.
Existence and reference.

MA

War crimes and their moral evaluation.
Philosophical psychology and aesthetics of imagination.
The metaphysics of F.H. Bradley.

FACULTY OF MATHEMATICS

COMPUTING SCIENCE

Due to a continued rapid and sustained growth in student load, the resource position, in terms of staff, space and housekeeping, has continued to be unacceptably low.

A Diploma in Computing Science, which is a one-year postgraduate degree, is available for graduates in subjects other than Computing Science. This course provides a concentrated update in current computing science methodology.

A Master of Computing Science was approved by Council late in 1982. Current resources permit only the part-time version of the course but it is hoped that outside financial support can be found to introduce the course full-time. The course is aimed at graduates who have no background or experience in computing. The government is seriously considering a major expansion of computer education in high schools. This course should appeal to experienced teachers who wish to obtain experience in computing science.

All enrolments in Computing Science increased substantially in 1982. Computing Science student load has more than doubled in the period 1979-1982.

The Fourth South Coast Summer School in Computing was held in December, 1982. It was the first event of the newly introduced university-wide Summer Session. The students were split into three groups; beginners, advanced and master class. A series of lectures on computing concepts, algorithm design, programming and advanced computing concepts were given to the three groups.

Facilities and Equipment

The PE-3220 Interdata 732 was upgraded to the dual PE-3230 at a cost of \$98,000.

Research Theses in Progress

PhD

Portability of operating system software.
Performance portable operating systems.
Student/machine interaction in microcomputer assisted teaching.

MSc

A local area network terminal multiplexer node.
Protocol for a local area network.

MATHEMATICS

1982 was a particularly successful year for the Department of Mathematics. There were over 470 students enrolled in Mathematics 1A at the beginning of the academic year. This was due mainly to high enrolment in the engineering area.

Throughout 1982 staff in the Department of Mathematics and Computing Science together with colleagues at the Institute of Advanced Education have presented after school and all day classes for talented mathematics students in years 7-12.

Facilities and Equipment

The following equipment was purchased in 1982:

Watanable Intelligent Plotter WX4671.
NPKS7700T Printer with 8K Buffer.
Apple Graphics Tablet with Interface.

Research Theses in Progress**PhD**

- Mathematical modelling of rate limiting mechanisms of pyritic oxidation in overburden dumps.
- Diffusion and heat condition problems with moving boundaries.
- A problem in sequential analysis.
- Mathematical models of the lung.
- Solution of sparse matrix eigenvalue problems arising in the applications of the finite element method.
- Random walk models.
- Boundary integral methods for problems in hydrodynamics.
- Boundary effects of shelf waves.
- Application of the finite element method to the design of gas slider bearings.
- Some problems associated with roll forming.

FACULTY OF SCIENCE

BIOLOGY

In 1982 a completely revised undergraduate teaching programme was introduced. The Department continued to offer one 100-level course which aims to introduce students to the full range of biological phenomena.

At the 200-level, two new courses (Botany and Zoology) provides the student with a foundation in classical taxonomic biology. These are complemented by two established subjects, Introductory Biochemistry and Evolution of Man. The former subject is designed to give the student a grounding in biochemistry, a major fundamental and unifying discipline of modern biology. The latter subject, offered also to general studies students, considers the evolution of man and the impact on the biosphere in terms of the broad principles and concepts of contemporary biology. Students undertaking a biology major must successfully complete all four subjects.

At the 300-level, one completely new subject, Microbial Physiology, has been added to the existing subjects, which give the third year biology student a choice from a range of biological topics for more advanced study.

A four-page brochure describing the biology teaching programme and outlining the research interests in the department was sent to all secondary schools in the Illawarra region.

Facilities and Equipment

Equipment purchased in 1982 included:

- An LKB 1250 Luminometer.
- A hydraulic French Press cell disintegrator.
- A Bomb calorimeter.
- A Wescor Osmometer.
- LKB Uvicord UV flow absorbance monitor.

The computing facilities of the department were also upgraded.

Research Theses in Progress

PhD

- Studies in the evolution of energy metabolism.
- Physiological and biochemical studies on *Dunaliella*.
- Osmoregulation in Eucaryotic micro-organisms.
- Osmoregulation in Cyanobacteria.
- The influences of thyroid hormones on the sodium pump in vertebrates.
- Insects and the role of refuges in post-fire succession in heathland.

MSc

- Plant-pollinator interactions in south eastern N.S.W. woodlands.
- Numerical taxonomy of dermatophyte yeasts.
- A study of the high biological productivity of Port Kembla harbour.
- The role of unburnt refuges in the maintenance of small-mammal populations after fire.
- Temperature regulation and hibernation in small marsupials.

CHEMISTRY

Overall student load remained about the same as in previous years. In 1982 there were 16 students taking at least 24 credit points of Chemistry at 300-level.

The Department decided to offer a bridging course in Chemistry in the two weeks prior to the start of 1st session 1983; as a consequence the Remedial Chemistry course would be reduced to 1 hour per week in session 1.

During 1982 a decision was made to cease offering the 96 credit point masters degree by coursework. Instead, a Master of Studies in Chemistry programme was designed for implementation from 1983. The general objectives are the same as those of the programme it replaced, but the much smaller credit point rating is more appropriate to the reduced numbers of staff in the department. The Honours Masters degree is still available by completion of the above 48 credit point coursework programme followed by a 48 credit point research thesis.

There are indications of a substantial growth in the number of PhD students in the department over the next couple of years, mainly resulting from developing links with nearby institutions such as CSIRO and AAEC at Lucas Heights.

The department gave a one hour presentation including a lecture, film and inspection of research facilities during Year 12 - Introduction Day. In addition, the Department was visited by groups of senior year students from the local high schools.

The department participated in the 1982 Work Experience Programme by hosting one pupil from Figtree High and one from Warilla High. Each girl spent one week under the supervision of various members of the technical staff.

Facilities and Equipment

The department was awarded \$100,000 from the ultramajor equipment vote for the purchase of a VG12-12F quadrupole mass spectrometer to replace the 11 year old EAI instrument. The new machine was installed in September and linked to a capillary column gas chromatograph. It is currently being interfaced with a Nova 3 computer to enable computerised acquisition and processing of the mass spectral data.

Research Theses in Progress

PhD

- Studies of possible carcinogenicity of coke oven emissions.
- Hydrolysis of metal ions.
- Chemical studies of air pollution in the Illawarra region.
- Studies in molecular potential surface calculation.
- Analytical studies in Australian shale oils.
- Ring closure reactions of substituted aminomethylarenes.
- Characterisation of components in shale oil.
- Analytical studies on shale oil.
- Studies in molecular interactions.
- An investigation of the chemical composition and mutagenicity of welding fume.

MSc

- Investigation of the cyclisation of dihydroisotryptamine.

GEOLOGY

The undergraduate teaching programme is directed at producing graduates who can be employed as professional geologists. Such an aim was as essential in the depressed job market at the end of 1982 as it had been for the buoyant market at the end of 1981. It demands a broadly-based course giving at least familiarity with, if not expertise in, all of the major areas of Geology. To give a course with a narrower base would make graduates much less acceptable to industry - both the local and coal-oriented industry and the wider spread of the raw materials and development industries - and to other employing organisations. Graduates from this programme have found employment in a wide range of companies, government instrumentalities, universities and the teaching profession.

The honours degree is of an end-on type. Typically only 50-60% of students expressing interest in taking the honours year are recommended for admission, the recommendations being based upon performance in Geology subjects in the first

three years of the course. A problem of the Department of Geology is that the recent excessive demand for geology graduates has resulted in companies stripping operations extending from staff through potential postgraduate students to potential honours students. This affected both staff and student populations. The present depressed condition of the mining industry will result in different pressures and a further change in the profile of the Department. The honours year contains some formal coursework but is intended primarily to develop a capacity for independent work. Support for the teaching programme of the Department was provided by two major companies during 1982. One of these had specifically recognised deficiencies in the support provided for teaching geology in Australian universities.

The postgraduate programme in Geology has historically been oriented towards PhD programmes, chiefly full-time students but with a significant number of part-time students from outside the Wollongong area taking programmes which relate to some of the areas of expertise of the academic staff. Even with the downturn of employment in Geology it may be some years before significant numbers of students could be expected to be interested in undertaking full-time postgraduate studies. For these reasons, part-time postgraduate students have become a more significant element in postgraduate teaching. Such students bring advantages in terms of experience and expertise to the University and commonly make available facilities and information which would not otherwise be readily accessible. The lack of a large cadre of postgraduate students "on site" is a disadvantage, but postgraduate students who do not reside in Wollongong nevertheless make a significant contribution to the academic life of the University. They also made heavy demands on some services.

The Department ran its second Geology Summer School for High School students from 30 November to 2 December. As in the previous year, the School consisted of lectures, films and practical sessions in the Department on the first day, and a two-day excursion (with an overnight stop at the Bungonia Environmental Centre) to the Marulan-Bungonia district. The school was attended by twenty students, mostly from year 11 (with several from year 10). A heartening feature of the attendance was that approximately 70% of students came from Campbelltown/southern Sydney area.

Facilities and Equipment

Most functions on the Image Analyser, purchased in 1981, became operational during 1982 but the XRF equipment is still not fully operational.

Research Theses in Progress

PhD

- The Permian coal-bearing basins of Western Australia and India.
- Studies in coal-bearing sequences in New Zealand.
- Sedimentation and diagenesis in the southern coalfields, N.S.W.
- Igneous rocks of the southern Sydney Basin.
- Geochemistry of recent sediments in Lake Illawarra.
- Directional properties of vitrinite reflectance and their relationship to stress conditions in coal seams.
- Thermal regimes in Australian sedimentary basins.
- Volcanic rocks in central western N.S.W.
- Relationship between coals and associated hydrocarbon source rocks.
- Aspects of sedimentology of coal measure sequences.

MSc

- Crude oil and potential source rock studies in the Eromanga Basin.
- Source potential of the lower part of the sequence in the Cooper Basin.
- Coal quality in the Gunnedah Basin.
- Aspects of igneous intrusions in the southern coalfield.
- Studies in micropalaeontology.
- Vitrinite reflectance distribution in the Otway Basin.
- Temperature effects upon the carbonisation of coal for blast furnace coke.
- Coal type and quality in the Latrobe Valley coals.

Coal facies relationships to sedimentary environments.
 Heat-altered coals in the Collinsville area.
 Uranium deposits in N.W. Australia.
 Comparisons between some Gondwana coals.
 Coals of the eastern Carpentaria Basin.
 Organic matter in oil shales.
 Mineralogical composition of Illawarra beach sands.
 Coal resource assessment in the Gunnedah Basin.

PHYSICS

A new 100-level course was inaugurated in 1982. This consisted of PHYS 131/132 "Physics for the Environmental and Life Sciences A/B". The performance of the students in this course was very good there being no failures in PHYS 132. The first subject, PHYS 131, was offered in Session 1 while the other was offered in Session 2. In addition, the other 100-level course, PHYS 141/142, was re-scheduled so that PHYS 141 was available in Session 1 and PHYS 142 given in Session 2 rather than each running in parallel through the full year. This alteration in schedule for this course appears to have significantly improved the pass-rate in PHYS 142.

A further increase in enrolments occurred in 1982. This was due to a large extent, to the increases in enrolments in engineering and to the introduction of PHYS 131/132.

Facilities and Equipment

Photometer head for astronomical observations.
 Crystal wire saw.
 Nuclear instrumentation for teaching.
 Liquid helium cryostat.
 Slew Motors for 18" telescope.
 Wavelength drive for spectrometer.
 Birefringent tuning filter for ring dye laser.
 Sound level meter.
 Multimeters.
 Diffraction grating.
 Power meter.
 Infrared polarizer.
 Dual range balance.
 Microcomputer and data processor.
 Linisher.
 Mirror and dye assembly.
 Oscilloscopes.
 Plate and film copier.
 Printer.
 Crystal polarizer.
 Digital panel meter.

Research Theses in Progress

PhD

Study of Neutron capture in the magic nuclides at $N=50$ and $N=82$.
 Piezospectroscopy of neutral copper impurities in germanium.

MSc

The measurement of fission neutron spectrum of ^{252}Cf and to determine the average neutron energy.
 An infrared wavelength modulation spectrometer for the study of impurity spectra of semiconductors.
 Scattering of light by solids.
 A survey of infrared astronomical objects.
 A study of some infrared detectors.
 An encoder system for the 18" telescope and UVR/IR photometry of bright UV stars.
 Polarisation of Wolf-Rayet stars.

In 1982 the Department continued to teach first year undergraduate education in collaboration with staff of the Institute Sector.

In response to reviews by staff and students, plans were made to increase the curricular flexibility of the second and third year programme. Major innovations for implementation in 1983 include the team teaching of second and third year history and sociology of education subjects and the concurrent offering of second and third year philosophy of education.

Close contact with regional schools was maintained in 1982, primarily through the Diploma in Education programme in which practising teachers participate either as methods lecturers or practice teaching supervisors. A major curricular innovation in 1982 was to teach the bulk of the foundation subjects of the Diploma in Education programme in a team teaching, integrated format.

Honours and postgraduate enrolments remained high in 1982 and, combined with heavy student loads in all other sectors of the Department's programme, ensured that the resources of the Department were stretched to their limit. In particular, the higher degree supervision load reached very high proportions and there is every indication that this load will increase in 1983.

Research Theses in Progress

PhD

- Relationships between psycho-social variables and music and dance traditions in the Philippines.
- Techniques for evaluation and assessment of drama as a contributor towards personal development of the participant.
- Diagnosis and educational placement of minimal mental retardates.
- Epistemological foundations of educational innovation.

MEd

- Retrospective Analysis: A methodology for curriculum development.

MA

- Curriculum development in the teaching of History in N.S.W. Schools in the period 1880-1920.
- Bilingual Education: A study of some attitudes and expectations in Australia.
- The function of imaginative play in young children.
- Compensatory education.
- Impact of new methods in History teaching: Britain and Australia.
- A theory of curriculum: The Catholic Agenda.
- Education and Society.
- The significance of the concepts of motive, conflict and relationship to establishing empathy in teaching of History.
- Some implications of compensatory education.
- Corporate planning behaviour in some teaching institutions.

GEOGRAPHY

In 1981, stress was laid on the Department's attempt to give a new thematic emphasis to its teaching programme and on the efforts being made to disseminate widely attractive and informative material bringing this change to potential students. New enrolments demonstrated the effectiveness of these efforts and in 1982 the programme of student information and attraction was further intensified.

The Departmental research programme continued to develop with all staff actively involved in the preparation and presentation of material for publication in international refereed journals, monographs or as book length studies.

For the first time Departmental Staff became substantially involved in outside consultancy, through the Friends Organization, with a variety of State and Federal Government Agencies and private concerns, bringing significant financial benefit to the Department.

Postgraduate student enrolments, both for course work and research degrees, continued to expand; the first doctoral thesis to be completed by one of the Department's Commonwealth Postgraduate Award holders was submitted in December.

Departmental involvement in and influences on national geographic affairs was given a major fillip by the appointment or election of staff to the Councils of the two Australian professional geographical societies.

The on-going process of evaluation and review of the Department's teaching programme and its effectiveness was maintained and some slight changes made to the programme in 1983 that will strengthen still further the vocational relevance of a major in Geography.

The introduction of a new subject "Transport Systems: Planning and Development", drawing upon the professional expertise of Dr. R. Robinson, recently returned from several years involvement in Transport Planning with the UN/ESCAP, complemented existing offerings in Urban and Regional Planning and Development particularly effectively in this regard. This added coherence was reflected in significant course enrolments.

Facilities and Equipment

In 1982 the bulk of the departmental equipment vote was spent on the construction of a tilting flume. This addition to the Department's research capacity will prove invaluable in allowing controlled experiments into the behaviour of sediments, e.g. in gravel and sand river beds, thereby complementing the already extensive field measurement and observation programmes carried out by staff and research students. It is also probable that this facility will encourage significantly more inter-departmental cooperative research activity and quite certain that the teaching programme will be assisted considerably.

Research Theses in Progress

PhD

- Aspects of industrial change and regional development.
- Vegetation of Morton National Park.
- Industrial development in Sri Lanka.
- The composition and distribution of rainforests in Illawarra.

MA

- Soils of Illawarra rainforests.
- Coal transport infrastructure: An analysis of the decision making process.
- Vegetation communities of the Budawang Ranges.

PSYCHOLOGY

The aims of the teaching programme at undergraduate level are to give students a broad introduction to the discipline of psychology. It also encourages specialization in selected areas of psychology, develops research skills and the ability to interpret and communicate the results of research. By achieving these aims the Department provides the academic background necessary for students' eventual acceptance as academic and professional psychologists through accreditation by the Australian Psychological Association.

The Department of Psychology also offers postgraduate courses such as: Diploma in Psychology, Diploma in General Psychology, Master of Arts in Applied Psychology, and postgraduate research degrees, Master of Arts (Honours) and Doctor of Philosophy.

A specified strand of study in the MA in Applied Psychology programme has been approved by the Public Service Board of New South Wales for the purpose of promotion to Clinical Psychologist. This approval is of considerable importance to prospective students who expect to work in State Government-funded health and welfare agencies in New South Wales.

The resting and return of subjects reflects the department's 5-year rolling plan, which rationalizes staff resources, while trying to maintain a viable range of choices for students.

In line with changes in course offerings over the past two years, the Department is continuing to redeploy some of its teaching resources from undergraduate to the graduate level. This change is partly in response to the needs of our own graduates and partly designed to contribute to the growing role of graduate training in Australian universities.

Facilities and Equipment

During 1982 the Department hoped that the new DEC, LS111/23 minicomputer would be connected with the UNIVAC Computer of the University. The continued delay is affecting several of the research programmes. Because this minicomputer was bought from funds coming in part from the Department's 1982 equipment budget they were able to buy little equipment in 1982. The Department's purchases were as follows:

- Sony SIT9ME Betamax Video Recorder.
- Sony HVC-3000P Betamax Video Camera.
- Meomedix NT216 Temperature Amplifier.
- Kodak SAV-2030 Carousel Slide Projector.

Research Theses in Progress

PhD

- Gestalt Therapy.
- Transpersonal approaches to healing.
- Individual differences in mental imagery.
- The effects of motor programming on the nervous system.
- Family therapy with children who are physically ill.
- Runaways.
- The development of personal constructs.
- Retention of executive personnel.
- Competition and co-operation: A role theory approach.
- Transition to University.
- Job satisfaction in health workers.
- A cross-cultural study of sex roles.
- The relationship between mother and infant.

MA

- Child abuse.
- Taste preferences.
- Self-actualization and the Women's Movement.
- Mental imagery.
- Sports medicine - the psychology of rehearsal.
- Perceptual deficit and reading disability.
- Adults' reactions to parental death.

SOCIOLOGY

During 1982 a decision was made to introduce two Masters of Studies degrees for the benefit of graduates in sociology and related disciplines, who for vocational or other reasons wish to extend their understanding of sociology. The Master of Studies (Sociology) is designed to allow graduates to pursue studies of society, culture and knowledge within frameworks provided by sociological theory. The Master of Studies (Social Policy) is perhaps most vocationally specific, and is

designed to allow graduates to pursue policy-oriented studies within a framework instructed by debates in sociological theory.

There was a slight fall in the number of students choosing to major in Sociology. However this is not seen as significant in the light of the increasing interest in honours and postgraduate programmes. The number of students choosing to major in the subject will also increase when the new H.S.C. subject "Society and Culture" is introduced.

Departmental activities aimed at attracting students included:

- (a) participation in the Year 12-Introduction Day and secondment of departmental members to high schools to talk to prospective university students.
- (b) circulating all schools in the area with pamphlets and posters aimed at publicising university opportunities in general and the offerings of Sociology in particular.
- (c) 800 letters were sent to students who had made enquiries about courses at this university for an arts degree. The letter contained information concerning courses offered by the Department.

On a more general basis the Department also had links into the community by way of such activities as talks to service clubs and providing media contacts for the local area as resource persons available for comments on social issues or news items affecting the region.

Research Theses in Progress

PhD

Scientific communication in the field of international relations.
 Science in society. A comparative perspective of alternative knowledge systems from the viewpoint of the sociology of knowledge.
 The historical determination of ideologies.
 The formation of social change movements.
 Culture and ideology in action - owner driver truckies in N.S.W.
 The organizational structures of intentional communities.

MA

Women and work.
 The effects of social and economic development on religious belief systems.
 Dynamics of change in marginal situations.
 The ethnic press in Australia.
 Analysis of changes to child welfare - 1939-1982.

In the two years immediately prior to the federation of the Wollongong Institute of Education and the University of Wollongong much activity in the Institute focussed upon defining aspects of community need. In response to brief advertisements posing the possibility of an Associate Diploma in the Arts being offered some 648 serious inquiries were received and supported the ultimate confidence placed in a Stage IV Submission to the Higher Education Board in mid 1981.

Following the establishment of a School of Arts and Community Studies in the Institute, the Centre for the Arts was structured as the first operational branch of the School. The initial specific aim of this Centre has been the implementation of courses for the award of a UG3 Associate Diploma in the Arts in areas of both performing and visual arts.

The function of the Centre in 1982 was to implement the subjects approved by the Higher Education Board for the Associate Diploma; and

- (a) to service the School of Education in the old Diploma of Teaching, Special Studies, and curriculum studies subjects in art, craft and music;
- (b) the new Bachelor of Education elective subjects and The Arts in Education curriculum subjects; and
- (c) the various external studies subjects in art, craft and music associated with these diploma and degree programmes.

The Associate Diploma course is designed for 2 years full-time or part-time equivalent study. It requires a decision by students to specialise to the extent of majoring in a specific area of visual or performing arts.

The content and expectations of principal studies and the selection of support studies also places obligations on the student to perform with increasing independence as the course progresses. Such expectations look to an emergence of evidence of confident individuality and some creativity in the student.

To complement this specialization in their major study, the student is required to choose minor studies. It is here that the opportunity to broaden student outlook and abilities is offered. Appropriate aspects of 'principal studies' from both visual and performing areas are offered and a list of additional subjects broadens further the scope of student choice.

Successful co-operation was achieved with three community organizations which were planned into various course offerings as possible performance outlets:

- The Illawarra Symphony Orchestra;
- The Illawarra Choral Society;
- The Conservatorium Theatre Company.

Various students were involved in numerous performances with these organizations during the year.

A most significant development in the area of choral music came from a fusion of the University singers with an Institute choral group to form a new University Choir made open to all University students and staff. This new choir numbered 75, was conducted in 1982 by Mr. David Vance, and combined with the Wollongong Symphony Orchestra and the Wollongong Conservatorium String Orchestra performing at a most creditable standard.

"West Side Story" was presented by the community based company known as "The Conservatorium Theatre Company". This involved some 20 Associate Diploma students in cast, production and front of house activities.

The first act of 'L'Orfeo' - Monteverdi, was an open air production by 18 Associate Diploma students at the 'Jennifer Bran' site.

The significant major productions on campus in the area of theatre, have been two plays: "The Legend of King O'Malley" - produced in the Institute's imaginatively adapted student canteen - and "Rumours of Our Death", in the Drama Hut.

A concert practice hour functions as part of the programme and is available to performance strand students, University campus musicians and occasional students from the community, by invitation, seeking experience in performance. Audiences comprise Associate Diploma students and, on suitable occasions, interested people from the University Campus and the community.

Major highlights of this inaugural year have been the two exhibitions of students work in all major and minor studies subjects in the Visual strand. The first of these - a mini exhibition was mounted unexpectedly at the end of Session I when the good quality of student works became apparent, even though they had only had 15 weeks of tuition.

The second exhibition was a long term plan to mount student works which could satisfy the scrutiny of an exhibition committee. A feature of the opening evening of this major exhibition was the provision of occasional music by musicians from staff and students of the Institute and the Wollongong Conservatorium.

SCHOOL OF EDUCATION

The fundamental aim of the School of Education is to promote excellence in educational practice, and to this end, the courses offered by the School reflect contemporary research and philosophy in education.

The philosophy of the School of Education is reflected in curriculum design where emphasis is given to the conceptual framework of courses and the integration of subject sequences that comprise courses. In the development and implementation of its courses, the School is committed to an wholistic view, where emphasis is placed on the value of totality of a student's programme, where the common goal is the pursuit of educational excellence, rather than any philosophy which gives priority to excellence in a single discipline or subject sequence.

In general, undergraduate courses include a professional studies strand and a discipline or general studies strand, while post-basic and graduate courses are professionally oriented in their entirety. Within the professional studies area, subjects and subject sequences included in courses offered by the School result in an integrated curriculum, prescriptive in nature but highly relevant to the vocational orientation of the course. While such subjects and subject sequences draw heavily upon the traditional discipline base, they are not studies as disciplines in their own right but in terms of their potential contribution to the overall course and the vocational competence of graduates. Discipline or general studies provide students with the opportunity to engage in equally rigorous studies in area(s) which may be less directly related to the vocational purpose of the course but which are expected to contribute significantly to the personal development of the student and result in a graduate whose knowledge and expertise extends beyond the vocational focus.

In 1982 the School of Education comprised 48 academic staff of whom four are principal lecturers and thirteen are senior lecturers. It offered undergraduate degree and degree-conversion courses in primary education, physical and health education, mathematics education and english/history education. In addition, specialised graduate diplomas were offered in the following areas: environmental science, health education, secondary mathematics education, school administration and reading/english as a second language education. The School has an enrolment of approximately 800 students of whom 260 undertake their course work through the correspondence mode.

As may have been expected, the impact of federation on the School of Education has had both positive and negative outcomes. On the positive side, the School has achieved independence in a larger institution and has enhanced the flexibility of its courses by including subjects from departments of the faculties sector among its offerings. The joint initiative in the 100-level education subject, commenced in 1981, was continued in 1982 with considerable success, reflecting improved mutual respect between staff of the School of Education and staff of the Department of Education. The increased need to communicate across sectors of the University has also contributed to an improvement in the attitudes of staff to one another. However, a significant residue of doubtfulness, defense, and isolationism is evident in communication across the sectors. It is hoped that with increased interaction across sectors, staff will become secure in the knowledge that their areas of expertise will be valued and respected across the campus in an atmosphere which gives them the right to determine and implement their philosophy of education.

CENTRE FOR STUDIES IN LITERACY

The Centre for Studies in Literacy was established in July, 1982, with the appointment of Dr. B. Cambourne as its head. The Centre is responsible for research into literacy and the development of subjects, courses and appropriate in-service programmes.

The Centre has participated in a range of activities since July, 1982. They include a number of Workshops with groups from this area as well as interstate. The Jervis Bay Naval College has requested assistance with Remedial English with its new recruits. A tentative plan for involvement with its new intake next year is currently being planned. Several groups have also requested articles on writing-teaching writing, for their publications.

This range of activities is sufficient to demonstrate that the Centre is a worthwhile enterprise, capable of making a significant contribution to the professional community.

SCHOOL OF INDUSTRIAL AND ADMINISTRATIVE STUDIES

The School of Industrial and Administrative Studies was formed in August 1982, by the appointment of the Head of School - Dr. M.J. Hough. Dr. Hough holds degrees in engineering and psychology, diplomas in industrial engineering, education and administration, a master's degree in administration and a doctorate in supervision from the University of Georgia. He was appointed from a Senior Lecturer position at Riverina College of Advanced Education, and his research interests relate to job satisfaction and career stages in public service professionals.

The School will commence teaching in 1983 through two new courses at Associate Diploma levels and the transfer of an existing Postgraduate Diploma in School Administration course from the School of Education.

The main activities of the Head of School in 1982 have been in 5 areas:

- course development and approval
- selection and appointment of new staff
- dissemination of information about the new School
- future planning
- personal academic endeavours.

Two Associate Diploma courses, one in Industrial Studies and the other in Computer Management have been recommended for approval and implementation in 1983.

The School has a profile of potential course development for possible introduction over the period to 1988. One of the early major priorities of the School in 1983 will be contact with the community to confirm need and demand for such courses, as well as consultation with appropriate Faculty sector departments and with T.A.F.E. for their attitudes towards such courses. In the case of Departments their ability to assist in the teaching of sections of these courses, if introduced, will be a major focus of consultation.

The School is allocating its immediately available resources in 1982/83 to building up a range of microcomputer based software relevant to business, industrial and scientific applications, as well as commencing a resource collection of management training material.

CENTRE FOR MULTICULTURAL STUDIES

After the uncertainty of 1981, which culminated in the Review of the Centre for Multicultural Studies the University re-affirmed its commitment to the Centre when Council endorsed the major recommendations of the Committee of Review.

The Centre did not participate in teaching during 1982. Some preliminary proposals were developed for the introduction of a Master of Studies degree to replace the Diploma in Applied Multicultural Studies, which was last offered in 1981.

In the absence of the Director and some uncertainty about the appointment of a full-time Head and support staff, in the future - research activity declined in 1982. However, full-time staff continued to develop the Centre's theoretical work on ethnicity and class and its relation to education and social policy.

Distance teaching, as the correspondence mode of education is now popularly described, poses problems for teacher and student which are not encountered in the face to face situation. Students are uncertain in the initial stages, feel isolated, and each believes that his worries and problems are unique. Teachers must accustom themselves to a different form of communication (mostly written) which needs to be crystal clear. They must be prepared to devote a great deal of time to very careful marking of assignments and the writing of comments which are critical, but helpful and encouraging to the students, and they must make sure that this work is done without delay so that students receive a positive feedback as quickly as possible after the submission of assignments.

The staff of the Institute has tried to overcome some of the difficulties created by distance teaching by means of:

- an Orientation Weekend at the beginning of each academic session so that students may visit the Institute and meet fellow students and teachers;
- vacation schools;
- tele-tutorials;
- a day and night answering service for students who wish to contact lecturers;
- encouraging students to form study groups in the areas where they live;
- visits by the Head of the Division and the Co-ordinator to groups of students outside of the Wollongong area.

The tele-tutorial has been introduced for the first time this year. A limited number of students are linked by telephone with a lecturer so that over a period of half an hour discussion may take place and questions be asked and answered. Mechanically these have proved successful, but we have not, as yet, had sufficient feedback to be able to reach any conclusions on their educational value.

GENERAL STUDIES

The aims of General Studies are to provide undergraduate students with a richer and more varied subject offering than this university could otherwise afford. This is done by means of interdisciplinary subjects where General Studies co-ordinates and services the presentation of subjects based on a single department but offered also under a General Studies number and aiming to attract students who might not otherwise look under the science schedule, for example, when enrolling or re-enrolling; and subjects which larger universities offer but for which there is no departmental establishment at Wollongong. A further important function of General Studies has been the launching and testing out of new subjects, which if successful can then be attached to the appropriate subject department.

RESEARCH INTERESTS AND PUBLICATIONS

FACULTY OF COMMERCE

ACCOUNTANCY

Research Interests and Major Topics of Investigation

Australian company financial reporting and New Zealand company financial reporting.
 Corporate taxation.
 Australian steel industry.
 Role of stockbroker recommendations in institutional investor decision making in Australia.

Monographs

J.B. Ryan, C.T. Heazlewood, B.H. Andrew and M.A. Perkinson. "New Zealand Company Financial Reporting: 1982", Auckland, (1982).

Refereed Publications

J.G. Jackson. "The New South Wales Prices Commission and the Use of Price Control as a Regulatory Device", *UNSW Law Journal* III, (1982).

J.B. Ryan. "Historic cost still has uses in a CCA world", *The Accountant's Journal*, (September, 1982).

H.Y. Teoh, S.K. Ooi and M. Ong. "Auditing and Public Accountability of Public Enterprises: The Malaysian Experience", *International Journal of Government Auditing*, Vol. 9, No. 3, (July, 1982), 8-15.

G.E. Tibbits. "Small Business and Interfirm Comparisons", *The Australian Accountant*, Vol. 52, No. 2, (March, 1982), 134-5.

Conference Papers

B.H. Andrew. "A More Equitable Approach to the Taxation of Private Companies", *Small Business Research Conference*, organised by the Institute of Industrial Economics, University of Newcastle, (May 1982) and published in W.C. Dunlop and W.J. Sheehan (eds.), *Small Business Research*, Institute of Industrial Economics, The University of Newcastle, (1982).

G.E. Tibbits. "The Impact of Interfirm Comparisons on Small Business Performance", *Small Business Research Conference* organised by the Institute of Industrial Economics, University of Newcastle, (May 1982) and published in W.C. Dunlop and W.J. Sheehan (eds.), *Small Business Research*, Institute of Industrial Economics, The University of Newcastle, (1982).

Reports

R.K. Wilson. "The Broken Hill Proprietary Company Limited - Steel Activities", Jones, Grice and Co., Sydney and Laurence, Prust and Co., London, (1982).

R.K. Wilson. "BHP's Steel Activities - Recent Developments and Outlooks", Laurence, Prust and Co., London, (1982).

ECONOMICS

Research Interests and Major Topics of Investigation

Labour Economics and Industrial Relations

Aborigines in the Workforce.
 An Australian Social Contract.
 Designing unemployment statistics in New Zealand.

Industrial Relations aspects of the Myers recommendation.
 Inflation and structural unemployment.
 Labour Market implications of changing patterns of work and education.
 Manpower management for the individual or organisation.
 New technology and Union bargaining procedures.
 Occupational and industrial segregation of women.
 Theory and measurement of labour hoarding.

Regional Economic Research

Analysis of safety statistics and procedures at Australian Iron and Steel.
 Assistance for the steel industry.
 Consumer perceptions of the Wollongong Central Business District.
 Decentralisation in Australia.
 Evaluation of the RED Scheme.
 Factors affecting the extraction rate in coal mining.
 Illawarra business prospects.
 Impacts of the Port Kembla Coal Loading Facility Expansion on the regional traffic programme.
 Methodology of estimating regional input/output tables.
 The choice between bus and car transportation in the Wollongong Region.

Economics of Developing Countries

Agricultural co-operatives in Papua-New Guinea.
 Analysis of absolute poverty.
 Employment and production of plantation agriculture in Papua-New Guinea.
 Overseas investment in Fiji.
 Productivity in Indian agriculture.
 The role of natural resources in economic development.
 Turnpike optimality in input/output systems.

Other Research Areas

The relationship between income taxes and the distribution of income.
 The effect of the tax system on capital investment decisions.
 The economics of crime and the parole system.
 The measurement of income tax progressivity.
 Models of flood mitigation.

Monographs

- R.G. Castle. "Government Expenditure and the Economy" in Veale, Walker, Murphy and Perry (eds.), *Australian Macroeconomics: Problems and Policies*, Sydney, (1982).
- R. Markey. "The ALP and the Emergence of a National Social Policy, 1880-1910" in R. Kennedy (ed.), *Australian Welfare History. Critical Essays*, Melbourne, (1982).

Refereed Publications

- T. Alchin. "Indirect Taxes in Australia: The Need for Reform and Expansion", *Australian Quarterly*, LIV, (Spring, 1982), 294-304.
- T. Alchin. "How do Models Assist in Business Decision-Making?", *Economics*, XVII, (May, 1982), 17-20.
- T. Alchin. "Direct versus Indirect Taxation", *National Bank Monthly Summary*, (September, 1982), 15-6.
- R.G. Castle. "Trade Unions and a Labor Government: A Social Contract for the Eighties", *Australian Quarterly*, (Summer, 1982), 382-93.
- R.G. Castle. "The Social Contract - a new path to Economic Recovery?", *National Outlook*, (August, 1982), 6-8.

- R.G. Castle and J.S. Hagan. "A Century of Aboriginal Unemployment in NSW", *National Outlook*, (December, 1982), 16-8.
- A. Endres. "Designing Unemployment Statistics in New Zealand: A Case History 1860-1960", *Australian Economic History Review*, XXII, (September, 1982), 151-71.
- A. Endres. "Why Bother with Methodology? (A Review Article)", *New Zealand Economic Papers*, XVI, (November, 1982).
- A. Endres. "The Economics of Social Measurement Processes", *International Journal of Social Economics*, IX:1, (1982), 1-40.
- D. Lewis. "The Measurement of the Occupational and Industrial Segregation of Women", *Journal of Industrial Relations*, XXIV, (September, 1982), 404-23.
- R. Markey. "New Technology and Economy and the Unions in Britain", *Journal of Industrial Relations*, XXIV, (December, 1982), 557-77.
- D.J. Thampapillai. "Towards the Monetary Valuation of Absolute Poverty", Occasional Paper No. 31, Development Studies Centre, Australian National University, (1982).

Conference Papers

- S. Ali. "The RED Scheme: A Re-evaluation", *Conference on Unemployment in the 1980s*, (July, 1982), Wollongong.
- R.G. Castle and J.S. Hagan. "Aboriginal Employment in Rural New South Wales, 1883-1982", *Conference on Unemployment in the 1980s*, (July, 1982), Wollongong.
- P. Doyle and D. Lewis. "Factors Affecting the Performance of Students in Quantitative Methods", *The Second Australian Economics Education Conference*, (January, 1982), Sydney.
- P.V. George. "Inflation and Structural Unemployment", *Conference on Unemployment in the 1980s*, (July, 1982), Wollongong.
- D. Lewis. "The Decomposition of changes in the Occupational and Industrial Segregation of Australian Women, 1891-1976", *Eleventh Conference of Economics*, (August, 1982), Adelaide.
- J. Mangan. "Employment and Unemployment in Australian Manufacturing: Some Demand Side Factors", *Conference on Unemployment in the 1980s*, (July, 1982), Wollongong.
- R. Markey. "The Trade Union Response to New Technology and Redundancies in the Communications Industry", *Conference on Unemployment in the 1980s*, (July, 1982), Wollongong.
- J. Steinke. "Some Employment Implications of Changes in Hours of Work Supplied and Demanded", *Conference on Unemployment in the 1980s*, (July, 1982), Wollongong.
- D.J. Thampapillai. "Trade-off Model for Conflicting Objectives in Resource Extraction Policy", *Eleventh Conference of Economists*, (August, 1982), Adelaide.

Reports and Other Publications

- S. Ali. "A Submission to the Industries Assistance Commission on Federal Government Intervention in the Australian Basic Iron and Steel Industry", (February, 1982).
- J. Mangan. "Illawarra Business Prospects Study", *Prepared for the Department of Industrial Development and Decentralisation*, (July, 1982).

3. Mangan. "Unemployment: Facts and Figures", *Community Information Bulletin* No. 13. (December 1982) 1-7, (reprinted in O.R.E. submission to the I.A.C. inquiry in certain matters related to the production of basic steel).
- R. Markey. "The Trade Union Response to New Technology in Australia" (June, 1982), *Prepared for Reserve Bank of Australia*.
- J. Steinke. "The Contribution of the University of Wollongong to the Illawarra Economy", *Illawarra Mercury*, (March, 1982).
- J. Steinke. "The Economic Implications of the 1982/83 Federal Budget", *Illawarra Mercury*, (August, 1982).
- J. Steinke. "The Economic Implications of the 1982/83 State Budget", *Illawarra Mercury*, (September, 1982).

Research Interests and Major Topics of Investigation**Water Engineering**

- Flood hydrograph modelling using linear and non-linear models.
- Flood frequency analysis using regional relations between flood statistics and catchment physical and climatic characteristics.
- Urban drainage hydraulics, use of detention basins for flood reduction, and energy losses in urban drainage pipe systems.
- Coastal engineering studies of the interaction of waves and structures.

Fluid Mechanics

- Hot-film anemometry utilisation in hydraulic engineering.
- Two-phase countercurrent flow in natural gas pipelines.

Geomechanics

- The stability of soil and rock masses.
- The consolidation of porous media saturated with fluid.
- Variable boundary problems on the base of both linear and non-linear theories.
- Development of the mathematical description of the consolidation process with consideration of some of the physical phenomena.
- Applications of the numerical solutions in engineering computation and prediction of settlement process.
- Reinforced earth structures.

Structural Design

- Analysis and design of unreinforced cellular brick walls and columns under axial and lateral loads.
- Experimental determination of the behaviour of timber beams reinforced with metal plates.
- The development of low-cost building material.

Materials

- The study and use of industrial by-products in cementitious materials.
- The behaviour of fly ash, granulated blast furnace slag and the rejects from the fluidised-bed-combustion of coal wastes when these materials are incorporated into concrete mixes.
- Properties and uses of rolled concrete.
- Fatigue properties of ferrocement.

Mining Engineering

- Roof bolting, ventilation, computer simulation and modelling analysis of mining operations, mine planning, rock outburst, coal stockpiling, mine gases, ground control.

Environmental Engineering

- Environmental aspects of coal mining especially with relationship to transport and storage.
- Wind tunnel testing of coals and suppressants.

Refereed Publications

- M.J. Boyd. "A Note on the Cordery-Webb Synthetic Unit Hydrograph", *Civ. Eng. Trans., I.E. Aust.*, CE24, No. 1, (1982), 107-108.
- M.J. Boyd. "Reply to Discussion by T.G. Chapman of 'A Note on the Cordery-Webb Synthetic Unit Hydrograph'", *Civ. Eng. Trans., I.E. Aust.*, CE24, No. 4, (1982), 363-365.
- R.N. Chowdhury and D.A. Grivas. "Probabilistic Model of Progressive Failure of Slopes", *J. Geotechnical Eng. Div., A.S.C.E.*, Vol. 108, No. GT6, (1982), 803-820.

- P.F. Loveday. "Impacts of Coal Mining Developments for Local Authorities", *Australian Coal Miner*, (July, 1982), 22-24.
- P.F. Loveday. "Coal Transport and Storage", *Australian Coal Miner*, (November, 1982).

Conference Papers

- M.J. Boyd. "A Linear Branched Network Model for Storm Rainfall and Runoff", Book 4, *Rainfall-Runoff Relationships, Proc. Int. Symp. on Rainfall-Runoff Modelling*, Mississippi S. Univ., Water Resources Publications, (1982), 111-124.
- M.J. Boyd. "Preliminary Design Procedures for Detention Basins", *Proc. 2nd Int. Conf. on Urban Storm Drainage*, Univ. of Illinois, Vol. 1, *Urban Stormwater Hydraulics and Hydrology*, Water Resources Publications, (1982), 10 pages.
- R.N. Chowdhury and P.A. Gray. "Sequential Excavation Analysis", *Proc. Int. Conf. on Finite Element Methods in Engineering*, Shanghai, China, (1982), 354-361.
- Md. Hanif and M.J. Boyd. "Wave Interaction with a Surface Breakwater by Finite Element Method", *Proc. Int. Conf. in Australia on Finite Element Methods*, Melbourne, (1982), 64-68.
- M.J. Lowrey. "Deterministic versus Statistical Identification of Structural Systems using FSS Test Signal", *Proc. 8th Australasian Conf. on Mechanics of Structures and Materials*, Newcastle, (1982), 29.1-6.
- D.G. Montgomery. "Flyash in Cement Pastes - Some Effects of Particle Size and Distribution", *Proc. of the Materials Research Society*, Boston, (1982), N.3.4, 10 pages.
- D.G. Montgomery. "Roller Compacted Concrete for Dams - A Case Study", *Transporting, Placing and Curing, How They Affect the Properties of Concrete*, Univ. of N.S.W., Sydney, (1982), 98-113.
- D.H. Pilgrim, I. Cordery and M.J. Boyd. "Australian Developments in Flood Hydrograph Modeling", Book 4, *Rainfall-Runoff Relationships, Proc. Int. Symp. on Rainfall-Runoff Modelling*, Mississippi S.U., Water Resources Publications, (1982), 37-48.

Reports

- N.I. Aziz and R.W. Upfold. "Model Simulations of the Wongawilli System of Pillar Extraction at Laleham No. 1 Colliery, Bowen Basin, Queensland", Report No. 1, *Department of Civil and Mining Engineering*, Univ. of Wollongong, (1982), 66 pages.
- M.J. Boyd. "1982 Annual Report of the University of Wollongong Climatological Station", *Department of Civil and Mining Engineering*, Univ. of Wollongong, (1982).
- M.J. Boyd, R.T. Wheway and M.P. Hevern. "Wind Statistics 1972-1980", *Department of Civil and Mining Engineering*, University of Wollongong, (1982).
- A.J. Johnston. "Slugcatcher Model Studies", Final Report to Woodside Offshore Petroleum, Perth, W.A., *Department of Civil and Mining Engineering*, Univ. of Wollongong, (1982), 95 pages.

Other Publications

- M.J. Boyd. "Hydraulic Laboratory Manual", *Department of Civil and Mining Engineering*, Univ. of Wollongong, (1982), 94 pages.
- R.W. Upfold. "Crisis Situations in Coal Mine Ventilation", *Department of Civil and Mining Engineering*, Univ. of Wollongong, (1982), 116 pages.

Research Interests and Major Topics of Investigation

- Design and construction of a twin rotor induction motor.
- Efficiency and optimal design of machines.
- Design of brushless slip-ring induction machines.
- Flux distribution in a new type of axial flux machine.
- Development of an electrically driven wheelchair.
- Development of a microprocessor suited to time-critical control applications.
- Robotics.
- Electronic data logger for recording wind and sunlight measurements.
- Investigation of the stability of a pinch roll d.c. drive.
- Design of a microprocessor controlled nuclear density gauge.
- Methods of improving the efficiency of electrostatic precipitators collecting flyash from the combustion of low sulphur coals.
- Developing a range of computer programmes suitable for use by Power Distribution Authorities.
- Developing a model of the interaction between primary and secondary corona in precipitators and in non-intrinsic measurement of precipitator disturbances.
- An adaptive computer control system for a full-size unit at Munmorah Power Station, N.S.W.
- System identification, modelling, optimisation and control.
- Communication and microwave imaging systems.
- Development of an adaptive antenna beam-former.

Refereed Publications

- Y.C. Cheah. "Design of a 6802-Controlled Propagation Strength Analyser for Land Mobile Radio Services", *Microprocessors and Microsystems*, Vol. 6, No. 4, (May, 1982), 177-181.
- Y.C. Cheah and F.J. Paoloni. "Resolution of Monochromatic Signal Sources Using a Simple Receiving Antenna Array", *Electronics Letters*, Vol. 18, No. 21, (October, 1982), 923-26.
- C.D. Cook and B.H. Smith. "Stabilization of Doubly-Fed, Single Frame Cascade Induction Machines: A Comparison of Different Feedback Strategies", *Proc. of International Conference on Electrical Machines*, Budapest, Hungary, (September, 1982).
- M.J. Duffy, T.S. Ng, Z. Herceg and K.J. McLean. "Some Measured Characteristics of an Electrostatic Precipitator Obtained Using a Microcomputer Controller", *Proc. of E.P.A. 4th Symposium on the Transfer and Utilization of Particulate Control Technology*, Houston, U.S.A., (October, 1982).
- K.J. McLean and L.E. Sparks. "Comparison of Negative and Positive Polarity Excitation of Electrostatic Precipitators", *Proc. Of E.P.A. 4th Symposium on the Transfer and Utilization of Particulate Control Technology*, Houston, U.S.A., (October, 1982).
- Z.H. Qureshi and T.S. Ng. "Optimal Input Design for Dynamic System Parameter Estimation: The D-Optimality Case", *SIAM J. Control and Optimization*, Vol. 20, No. 5, (September, 1982), 713-721.
- R.A. Russell. "Teaching Digital System Design", *Proc. of Pacific Region Conference on Electrical Engineering Education*, Ballarat, (December, 1982).
- B.H. Smith. "The Manley-Rowe Relationships and Parametric Oscillatory Motion in Electromechanical Devices", *IEE Proc.*, Vol. 129, Pt. B., No. 6, (November, 1982), 373-375.

Conference Papers

- C.D. Cook. "Robots, Automation and Quality of Life", *Conference on Unemployment in the 1980s*, Wollongong, (July, 1982).

- C.D. Cook. "Some Aspects of Robot Design", 52nd ANZAAS Congress, Sydney, (1982).
- F.J. Paoloni and M.J. Duffy. "Computer Image Reconstruction of Microwave Holograms", *Radio Research Board Seminar on Image Processing*, Paper 7, Sydney, (June, 1982).

Other Publications

- Y.C. Cheah. "Minimum Component-Count Microprocessor", *Wireless World*, Vol. 88, No. 1557, (June, 1982), 61.
- C.D. Cook. "Robots, Automation and Quality of Life", *Productivity News*, (July/August, 1982).
- C.D. Cook. "Robots in Australian Industry", *Plantline*, (August, 1982).

MECHANICAL ENGINEERING

Research Interests and Major Topics of Investigation

- Control of large scale systems.
- Solar energy capture and analysis.
- Analysis and comparison of close-coupled solar water heaters.
- Flow properties of coal for storage bin design.
- Flow properties and handling of precipitator dust.
- Dense phase conveying of powders.
- Computer-aided bin design.
- Flow of fine powders from mass flow bins.
- Environmental engineering.
- Machine element design.
- Hydrodynamics.
- Self-tuning regulators.
- Coal technology.
- Tribology-bearings, friction and wear.
- Vibration problems in magneto-elasticity.
- Conversion and upgrading of the program MIMIC on UNIVAC.

Refereed Publications

- A.W. Roberts, P.C. Arnold, A.G. McLean and O.T. Scott. "The Design of Gravity Storage Systems for Bulk Solids", *Mech. Engg. Trans., IE Aust.*, Vol. ME7, No. 3, (September, 1982), 81-95.
This paper has resulted in the authors being awarded the George Julius Medal for 1982. The Award is made annually for the paper judged by the Mechanical Engineering College Board to be the most outstanding in the discipline of Mechanical Engineering during the previous 12 months.
- P.C. Arnold, A.G. McLean and N.A. Moore. "The Application of Computer Graphics to the Flow Property Testing of Bulk Solids", *Mech. Engg. Trans., IE Aust.*, Vol. ME7, No. 3, (September, 1982), 152-157.
- A.G. McLean and P.C. Arnold. "Gravity Flow of Powders from Mass Flow Channels", *Mech. Engg. Trans. IE Aust.*, Vol. ME7, No. 3, (September, 1982), 158-160.
- A.G. McLean and P.C. Arnold. "Bulk Solid Consolidation Considerations in the Design of Silos", *Agric. Engg. Aust.*, Vol. 11, No. 1, (1982), 29-31.
- A.G. McLean and P.C. Arnold. "Wall Load Considerations in the Design of Silos", Paper presented at *Conf. of Agric. Engg. IE Aust.*, (27-29 August, 1982).
- P.C. Arnold and A.G. McLean. "An Analytical Model for the Flow of Bulk Solids from Mass Flow Channels", *Proc. of Intl. Symp. on Powder Technology '81*, Soc. of Powder Technology, Japan, (1982), 249-256.

A. Basu. "Hyperelasticity and its Applications to Large Deformations of Thin Plates", *Bull. Cal. Math. Soc.* 72, (1982), 211-218.

Conference Papers

A.W. Roberts, P.C. Arnold, A.G. McLean, and O.J. Scott. "The Design of Gravity Storage Systems. Part 1: Bins, Hoppers and Stockpiles", *Proc. of First Aust. Intl. Bulk Materials Conf.*, Sydney, (March, 1982), 91-110.

A.W. Roberts, P.C. Arnold, A.G. McLean and O.J. Scott. "The Design of Gravity Storage Systems. Part 2: Bin Pressures, Feeders, Flow Rates and Some General Design Considerations", *Proc. of First Aust. Intl. Bulk Materials Conf.*, Sydney, (March, 1982), 111-128.

P.C. Arnold. "Practical Aspects to Storage in Hoppers", Paper presented at *Solidex '82, Solids Handling Conference*, Harrogate, U.K., (30 March - 1 April, 1982), D.67 to D.89.

P.C. Arnold. "Feeding of Bulk Materials onto Conveyor Belts with Special Reference to Feeders and Feeder Loads", Paper presented at *Three Day Seminar on Belt Conveying of Bulk Solids*, Newcastle, (November, 1982), 13.1-13.55.

A.G. McLean. "The Application of Soil Mechanics Theory to Predict the Forces on Tillage Implements", Paper presented at *Agric. Engg. Conference*, Armidale, (August, 1982).

Reports and Other Publications

P.C. Arnold and W.R. Armitage. "Dense Phase Pneumatic Conveying of Bulk Solids", *Process & Control Engineering*, Vol. 35, No. 12, (December, 1982), 10-15.

S.A. Marshall and G.J. Montagner. "The Comparison of Three Close Coupled Solar Water Heaters under Summer Conditions", *Dept. of Mech. Eng. Report*, The University of Wollongong, (1982).

G.J. Montagner. "No-Draw-off/Draw-off Comparison of Prototype Close Coupled Solar Water Heaters, November-December, 1982", *Dept. of Mech. Eng. Report*, The University of Wollongong, (1982).

M.J. Boyd, R.T. Wheway and M.P. Hevern. "Wind Statistics", The University of Wollongong Climatological Station, (Jan. 1982).

R.T. Wheway (ed.). *Proceedings of the Symposium "Water Resource Management and Coastal Development"*. (Aug., 1982).

METALLURGY

Research Interests and Major Topics of Investigation

Shape memory effect.
Solidification.
Thermomechanical processing of microalloyed steels.
Recovery and recrystallization.
Cold rolling and annealing.
Ultra high speed annealing.
Cold working of metals.
Advanced mechanical testing facilities.
The kinetics of seiving.
The aerodynamic behaviour of the iron blast furnace.

Refereed Publications

N.F. Kennon, D.P. Dunne and L.A. Middleton. "Ageing Effects in Copper-Based Shape Memory Alloys", *Metallurgical Transactions*, Vol. 13A, (1982), 551-557.

- D.P. Dunne and N.F. Kennon. "The Structure of Martensite in a Cu-Zn-Al Alloy", *Script Metallurgica*, Vol. 16, (1982), 729.
- D.P. Dunne and N.F. Kennon. "Crystallographic Measurements Using Optical Microscopy", *Metals Forum*, Vol. 5, No. 1, (1982), 29-31.
- N.F. Kennon and N.A. Kaye. "Isothermal Transformation of Austenite to Pearlite and Upper Bainite in Eutectic Steel", *Metallurgical Transactions*, Vol. 13A, (1982), 975-978.
- R.W. Smith and D.P. Dunne. "Isothermal Precipitation of VCN in a V-bearing HSLA Steel", *Micron*, 13, (1982), 281.
- D.P. Dunne. "Recrystallization in a Cold-Rolled Fe-V-C Alloy", *Metal Science*, 16, (1982), 259.
- R.W. Smith, J. Williams and D.P. Dunne. "Ageing of Hot-Rolled HSLA Steels", *Metals Forum*, 5, (1982), 109.
- N. Standish. "Permeability of Blast Furnace Burdens", *Ironmaking and Steelmaking*, 9, (1982), 207-213.
- N. Standish and P. Dawson. "Reclaiming Benefits in the Ore Yard", *Iron and Steel International*, No. 5, (1982), 159-163.
- T. Chandra, I. Weiss and J.T. Jonas. "Influence of Dynamic Recovery and Dynamic Recrystallization on Coarsening of Nb(Cn) in Nb-Microalloyed Steels", *J. Met. Science*, Vol. 16, (February, 1982), 97-104.
- N.F. Kennon and D.P. Dunne. "Shape Strains Associated with Thermally-Induced and Stress-Induced Martensite in a Cu-Al-Ni Shape Memory Alloy", *Acta Metallurgica*, Vol. 30, (1982), 429-435.
- N.F. Kennon and D.P. Dunne. "Shape Memory Behaviour", *Metals Forum*, Vol. 4, No. 3, (1981), 130-134.

Conference Papers

- T. Chandra, D. Bendeich and D.P. Dunne. "Dynamic Recovery and Recrystallization in a Duplex Stainless Steel", *6th International Conference on the Strength of Metals and Alloys*, Melbourne, (August, 1982), 505-510.
- T. Chandra, M.G. Akben and J.T. Jonas. "Effect of Mn on the Dynamic Recrystallization Behaviour of Ti-Bearing Microalloyed Steels", *6th International Conference on the Strength of Metals and Alloys*, Melbourne, (August, 1982), 499-504.
- N.F. Kennon and D.P. Dunne. "Strain and Strain Recovery in Shape Memory Alloys", *Proceedings of 35th Annual Conference of the Australasian Institute of Metals*, Sydney, (May, 1982).
- R.M. Smith and D.P. Dunne. "Effect of Austenite Deformation on Precipitation in a V-bearing HSLA Steel", *35th Annual Conference of the Australasian Institute of Metals*, Sydney, (May, 1982).
- R.M. Smith, T. Chandra and D.P. Dunne. "Ferrite Grain Refinement in a V-bearing HSLA Steel", *ICSM 6*, Melbourne, (August, 1982).
- M. Atkinson. "Fundamental aspects of Sheet Metal Formability", *35th Annual Conference of the Australasian Institute of Metals*, Sydney, (May, 1982).
- M. Atkinson. "Plastic Stress-strain Relationships of Some Polycrystalline Metals Tested in Biaxial Tension to High Strain", *ICSM 6*, Melbourne, (August, 1982).

Research Interests and Major Topics of Investigation

- The effects of industrialization upon English Art of the eighteenth and nineteenth centuries.
 The relationship between class, politics and personality in the teaching of literature.
 Old English language and literature.
 Middle English language and literature.
 Australian English.
 Shakespeare.
 Sixteenth century lexicography.
 The language of James Joyce.
 Place names of Suffolk.

Refereed Publications

- R.G.T. Southall. "The Atmosphere of Industry", *Artery*, VI, ii, iii, 18-23.
 R.G.T. Southall. "The Palace of Art", *Meridian*, I, i, 5-10.
 R.G.T. Southall. "The Strange Case of Aust. Lit." in *Aspects of Australian Culture*, ed. Daalder and Fryar, Adelaide, 33-39.
 R.G.T. Southall. "Playing God", *Indian Journal of Political Science*, XLI, iv, 871-5.
 R.G.T. Southall. "The Hamlet Syndrome", *Hamlet Studies*, III, i, 3-12.
 R.G.T. Southall. "The Myth of the Mainstream", *Australian Left Review*, No. 83, 30-33.
 D.M.E. Gillam. "The Fool and the Tricksters: Studies in Honour of Enid Welsford", ed. Paul V.A. Williams, *English Studies*, Vol. 63, No. 2 (April, 1982), 159-161.
 D.M.E. Gillam. "The Theory of English Lexicography 1530-1791 by Tetsuro Hayashi", *English Studies*, Vol. 63, No. 2, (April, 1982), 165-167.
 D.M.E. Gillam. "Beowulf", edited by Michael Swanton, *English Studies*, Vol. 63, No. 3, (June, 1982), 278-281.
 D.M.E. Gillam. "Old English Prose and Verse", ed. Roger Fowler, *English Studies*, Vol. 63, No. 3, (June, 1982), 281.
 D.M.E. Gillam. "Piers Plowman and the Image of God" by D.M. Murtaugh", *English Studies*, Vol. 63, No. 4, (August, 1982), 363-366.
 D.M.E. Gillam. "Chaucer's Language and the Philosopher's Tradition by J.D. Burnley", *English Studies*, Vol. 63, No. 4, (August, 1982), 360-363.
 D.M.E. Gillam. "Lovers and Riders in Chaucer's 'Anelida and Arcite'", *English Studies*, Vol. 63, No. 5, (October, 1982), 394-403.
 R. McConchie. "Additions to OED from Horman's *Vulgaria* 1519", *Notes and Queries*, Vol. 28, No. 6, (December, 1981), 487-489.
 R. McConchie. "Additions to OED from John Cotta's *Ignorant Practisers of Physicke*, 1612", *Notes and Queries*, Vol. 28, No. 6, (December, 1981), 490-93.
 R. McConchie. "Shakespeare's Philip Sparrow", *The Explicator*, Vol. 40, No. 1, (Fall, 1981), 7-9.
 R. McConchie. "Foul sin gathering head: Venereal Disease in Shakespeare's *Henry the Fourth, Part Two*", *Parergon*, No. 12, (April, 1982), 31-37.

Conference Papers

- R. McConchie. "Wise and Learned Cunctation: Medical Terminology 1550-1612 and the OED." Paper presented to the 10th ANZAMRS Conference held in (August, 1982).

ENGLISH LITERATURE AND DRAMA

Research Interests and Major Topics of Investigation

Scottish Literature.

The Theatre Company: its role in the development of drama theatre, with specific reference to a regional company, Theatre South.

Attitudes to feminine beauty in sixteenth century poetry.

The poetry of Henry Howard, Earl of Surrey.

Adolescents and television drama: Taste discrimination and critical responses.

Sex role stereotyping in Australian television programming.

When the past caught up with present: British docudrama and the Polish crisis.

Development of curriculum structures and teaching strategies for television studies.

Past meaning, present significance: essays on literary history and Australian writing.

Refereed Publications

- D. Davis. "A Mirror of Our Dreams by Joyce Doolittle and Zina Barnieh", *Theatre History in Canada*, 2, 2, (Fall, 1981).

- M. Scott. "Groupwork in Experimental Drama Studies: Some Problems and Possible Solutions", *Small Groups Newsletter*, 4, 1, (1981).

- M. Scott. "Drama and the O.A. Child: a Report on the Warrawong Project", with M. Smart, published in *Drama Teachers' and English Teachers Association Journals* in each State.

- M. Scott. "Experimental Drama Studies and Human Relations Groups", *NADIE Journal*, (June, 1982).

- J. Wieland. "Finding What Will Suffice: Fictions and the Commonwealth Poet", *New Literature Review*, 10, (1982), 18-28.

- J. Wieland. "A.D. Hope", Entry in Vol. II, *The Encyclopaedia of Twentieth Century Writers*, Ungar, New York, (1982).

- J. Wieland. "A.D. Hope's Latter-day Ulysses: 'The End of a Journey' and the Literary Background", *Australian Literary Studies*, 10, 4, (1982), 668-77.

- W. McGaw. A note on Donne's praise, "Least Truth for my subjects", *American Notes and Queries*, 19, (1981), 140-91.

EUROPEAN LANGUAGES

Research Interests and Major Topics of Investigation

Aspects of the writings of Federico de Roberto, with particular reference to Spanish influences.

Italian-American theatre of the early 20th century.

Neapolitan operas of the early 18th century.

An enquiry into the nature of eroticism in contemporary French literature.

Foreign language programs in Australian tertiary institutions.

The writing of history as a form of propaganda in Renaissance Italy.

Aspects of French regionalism, with particular reference to the southern region of Occitanie and to medieval history.

A comparative study of Pierre Drieu la Rochelle and Aldous Huxley.

Structural aspects of Flaubert's *Trois contes*.

- Factors affecting the acquisition of intonation in French language classes.
 A survey of multilingual radio services in Australia.
 Folklore among primitive peoples.
 Contrastive linguistics.

Monographs

- D.S. Hawley. *Foreign Language Study in Australian Tertiary Institutions*. Wollongong, (1982). 97 pages.
- D.S. Hawley. *Survey of Students Enrolled in Italian and French Courses in Tertiary Institutions*. Wollongong, (1982).
- G.J. Ianziti. "The Commentaries of Giovanni Simonetta: History and Propaganda in Sforza Milan (1450-1500)", in C. Condren and R. Pesman (eds.), *Altro Polo, A volume of Italian Renaissance Studies*, Sydney, (1982), 79-98.
- R.B. Leal. *Drieu la Rochelle*, Boston, (1982).

Refereed Publications

- G.J. Ianziti. "A Humanist Historian and His Documents: Giovanni Simonetta, Secretary to the Sforzas", *Renaissance Quarterly*, XXXIV, (1981), 137-147.
- G.J. Ianziti. "The First Edition of Giovanni Simonetta's *De rebus gestis Francisci Sfortiae Commentarii*: Questions of Chronology and Interpretation", *Bibliothèque d'Humanisme et Renaissance*, XLIV, (1982), 137-147.
- R.B. Leal. "Bibliographie de Drieu la Rochelle", *Cahiers de l'Herne*, 42, (1982), 409-427.
- G. Rando. "Difficoltà Linguistiche degli Studenti 'Oriundi'", *Incontri*, 4, (Maggio 1981), 7-10.
- G. Rando. "Tre Scrittori Italiani: Italo Calvino, Mario Luzi, Paolo Volponi", *Queensland Dante Review*, (1981), 6-21.
- G. Rando. "Multilingual Radio in Brisbane", *Media Information Australia*, 26, (November, 1982), 41-49.
- G. Rando. "L'Insegnamento dell'Italiano agli Italiani d'Australia", *Lingua Nostra*, XLIII: 2-3, (1982), 72-78.
- G. Rando. "L'Immigrazione come fatto poetico: La Poesia di Luigi Strano" in L. Strano. ...*E Risplende il Sole*, Mt. Wilson, (1981), 3-5.

Conference Papers

- V.J. Cincotta. "De Roberto and the Critics - a re-evaluation", at *Research Seminar*, Department of Italian, University of Sydney, (May 1982).
- V.J. Cincotta. "Writers of Narrative Fiction - the Italian American Experience", at *National Seminar on Italo-Australian Narrative and Drama Writers*, University of Wollongong, (September, 1982).
- G. Rando. "Alcuni Veneti in Australia: The Riverina e Giru," at *Conference on Veneto Migration to Australia*, University of Venice, (January, 1982).
- G. Rando. "Raffaello Carboni and the Question of Linguistic Competence", at *XXI AULLA Congress*, Massey University, (January, 1982) (paper read by Professor R.B. Leal).
- G. Rando. "The Ethno-Cultural Issue in/and Italo-Australian Literature", at *Second Australian Conference on Italian Culture and Italy Today*, University of Sydney, (August 1982).

- G. Rando. "Il Destino di Giuseppe Giliherito" at National Seminar on Italo-Australian Narrative and Drama Writers, University of Wollongong, (September 1982).

Reports

- V.J. Cincotta. Senior research assistant (ARGC grant) to Dr. Graham Hardie of the University of Sydney, Department of Music; for translation and for the Neapolitan dialect of the 17th and 18th centuries for rare texts of Neapolitan Comic Opera from 1707 to 1750.
- V.J. Cincotta. 1982 Theatre South Production of Dario Fo's *Non si paga, non si paga*; translated Italian text into colloquial English with no cuts for character analysis and stage direction.
- V.J. Cincotta. "Naples...the Parthenopean City" published in *Musica Viva Australia* Programme for the *Nuova Compagnia di Canto Popolare*, 12-15. *Playbill Publications*, (February, 1982). The article was also used in the Adelaide Festival Programme for the same Compagnia.
- V.J. Cincotta. Published in *La Fiamma*, July, 1982, (translated by Dr. Gianna Batzella) "I problemi dell'insegnamento dell'Italiano all'universita di Wollongong".
- G. Rando. "Submission for NAATI Recognition of an Interpreting/Translating (English/Italian) Course to be offered at the University of Wollongong in 1983", Department of European Languages (University of Wollongong), (August 1982).

HISTORY

Research Interests and Major Topics of Investigation

- History of employment of aborigines in N.S.W.
 Comparative study of incomes policy in Australia, Great Britain, Sweden, West Germany and Austria.
 History of trade unions in the twentieth century.
 Aspects of cross-cultural administration in the modern colonial era.
 Colonial administration in Papua New Guinea.
 Britain, the U.S. and the Korean War.
 David Low, political cartoonist.
 Growing up in the Illawarra 1838-1984.
 Blue collar workers in Wollongong in 1938.
 Mount Kembla disaster, 1902.
 The transition in the writing of ecclesiastical history in Britain, 1750-1850

Monographs

- J. Castle. "Australia in the 1920's", in *Issues in Australian History*. Longmans, Melbourne, (1982).
- A.M. Healy. *Tunku Abdul Rahman*. St. Lucia, (1982).
- W.M. Mitchell, and G. Sherington. "Children and Families in Nineteenth Century Illawarra", *Australia 1888*, Bulletin No.9, (April 1982).

Refereed Publications

- A.M. Healy. "Vietnam's Foreign Policy and Economy", *Vietnam Today*, XXII, (August 1982), 4-9.

Conference Papers

- J. Castle, and J.M. Jones. "Women in Australian Universities", S.A.A.N.Z., (August 1982), University of N.S.W.

- J. Hagan, and R.G. Castle. "Aboriginal Unemployment in Three Rural Areas of N.S.W.", *Conference on Unemployment*, University of Wollongong, (July, 1982)
- I. McLaine. "The Life and Death of Colonel Blimp", *Conference of the Australian Modern British History Association*, University of Sydney, (September, 1982).

HISTORY AND PHILOSOPHY OF SCIENCE

Research Interests and Major Topics of Investigation

- The process of theory discovery.
 Technological applications of Mendelism in Australia.
 Recombinant DNA, eugenics and ethnics.
 Implications of trends in coal and aluminium demand for Australian energy policy.
 Sociology and political economy of technological development: the nuclear energy debate.
 National policy - making for science and technology.
 The state of University research.
 An evaluation of the effectiveness of the Commonwealth Postgraduate Award scheme.
 Australian technology policy.
 The state of technology development and introduction in the N.S.W. private sector.
 The sociology of scientific controversy: vitamin C megatherapy.
 The social construction of Darwin's theory of sexual selection.
 The scientific revolution and the seventeenth century.
 The historical anthropology of doctrines of scientific method 1600-1900
 The "Crisis" of the seventeenth century and the origins of modern science: 1610-1650.

Monographs

- J.E. Falk. *Global Fission: The Battle Over Nuclear Power*, Oxford University Press, Melbourne, (1982), 410 pages.
- J.E. Falk. "The Labour Movement and Nuclear Technology in the South Pacific" in P. Davis (ed.), *New Zealand Labour Perspectives: Social democracy in the Pacific*, Ross, Auckland, (1982).
- G. Larcombe and J.E. Falk. "Energy and Resources Issues", in K. Turner, E. Chaples and H. Nelson (eds.), *Its Got to be Wran? The Politics of Personality and the N.S.W. Election 1981*, University of Sydney, Sydney, (1982).
- R. Johnston and J.E. Falk. "The Challenge of Information Technology for Management, Labour and the Community", in *Technological Change - Impact of Information Technology 1982*, Department of Science and Technology, Australian Government Publishing Services, Canberra, (August, 1982).
- R. Johnston. "The Identification and Control of Hazards Arising from Genetic Engineering", in *Genetic Engineering: Commercial Opportunities in Australia*, Australian Government Publishing Services, Canberra, (1982).
- R. Johnston and B. Gillespie. "Carcinogenic Risk Assessment in the USA and UK", in B. Barnes and D. Edge (eds.), *Science in Context*, Open University Press, Milton Keynes, (1982).
- R. Johnston and D. Robbins. "The Role of Cognitive and Occupational Differentiation in Scientific Controversies" in H.M. Collins (ed.), *Sociology of Scientific Knowledge*, Bath University Press, (1982).

Refereed Publications

- M. Campbell. "Human Factors in Technology", *Methodology and Science*, 15, (1982), 143-52.

- M. Campbell. "Mendel's Theory: Its Context and Plausibility", *Centaurus*, 26, (1982), 38-69.
- J.E. Falk. "Electricity in Australia", *The Current Affairs Bulletin*, Vol. 58, No.10, (March, 1982), 16-26.
- J.E. Falk. "Movement Against Uranium Mining", *Arena*, No.61, (1982), 149-59.
- R. Johnston. "Australian Science Policy: Now We Can Steer, Where Do We Want to Go", *Current Affairs Bulletin*, Vol.59, No.3, (August, 1982), 29-30.

Conference Papers

- M. Campbell and M. Cawte. "Theory Acceptance: William Bateson and Mendelian Theory", *Australasian Association for the History, Philosophy and Social Studies of Science Conference*, Lorne, (November, 1982).
- J.E. Falk. "An Overview: Room and bust in the Aluminium industry", *Australasian Association for the History, Philosophy and Social Studies of Science*, Proceedings, (1982), 127-8.
- J.E. Falk. "The South Pacific Nuclear Free Zone Proposal", invited paper to *Seminar on Disarmament: The Great Powers and Australia's Role*, Melbourne University, (May, 1982).
- R. Johnston. "Government Policies for R&D and Innovation: Rearranging the Deckchairs", *Plenary Session of 52nd ANZAAS Congress*, Macquarie University, (May, 1982).
- R. Johnston. "Tools for Survival: The Critical Role of 'Science, Technology and Society' Education", *National Symposium on 'Education about Science: Critical Challenges to Science Education'*, University of Wellington, New Zealand, (September, 1982).
- D. Bartels and R. Johnston. "Recombinant DNA Research: The Sociology of Goal-Directed Science", *Australasian Association for the History, Philosophy and Social Studies of Science Conference*, Lorne, (November, 1982).
- E. Richards and E. Newland. "Politics and Science in the Vitamin C and Cancer Controversy", *Australasian Association for the History, Philosophy and Social Studies of Science Conference*, Lorne, (November, 1982).
- J.A. Schuster. "The Developmental and Structural Demystification of Descartes' Method: A Case Study in the Construction of Scientific Discourses", *Proceedings of the Australasian Association for the History, Philosophy and Social Studies of Science*, xiii (1982), 57-96.
- J.A. Schuster and Fr B. Brundell. "New Perspectives on Descartes, Gassendi and the Origins of the Mechanical Philosophy in France: 1620-1640", *ANZAAS Congress*, HPS Section, Macquarie University, (May, 1982).
- J.A. Schuster. "On the Ethnomethodology of Methodology: A Preface to the Future Historiography of Scientific Method", *Australasian Association for the History, Philosophy and Social Studies of Science Annual Conference*, Lorne, (November, 1982).

Reports

- R. Johnston, J. Black and S. Carmichael. *Problems and Prospects of Technology Development and Introduction in New South Wales Private Enterprise*, New South Wales Science and Technology Council, Sydney, (1977).
- R. Johnston. Submission to the Industries Assistance Commission on Certain Budgetary Assistance to Industry.

Research Interests and Major Topics of Investigation

Political obligation,
 Applied aesthetics,
 Extra-legal rights,
 Existence,
 Probability and induction,
 Modal logic,
 Propositional attitudes,
 Indicative conditionals,
 Dialogue,
 Philosophy of Biology,
 Responsibility and killing.

Monographs

- L. Chipman. "Kant's Categories and Their Schematism" in Ralph C.S. Walker (ed.) *Kant on Pure Reason*, Oxford, Oxford University Press, (1982).
- L. Chipman. "The Children of Cynicism" in Robert Manne (ed.) *The New Conservatism in Australia*, Melbourne, Oxford University Press, (1982).
- L. Chipman. "The Menace of Multiculturalism" in P. Coleman, L. Shrubbs, and V. Smith (eds.) *The Best of Quadrant*, St. Lucia, Queensland University Press, (1982).
- J.D. Mackenzie. "Dialogue and Proof" in John Crossley (ed.) *History of Mathematics*, Clayton, (1981). (Publication delayed until 1982).

Refereed Publications in Specialist Philosophy Series

- L. Chipman. "Existence Reference and Singular Terms", *Mind*, xcii:361, (1982), 96-101.
- L. Chipman. "Legal Reasoning", *Archives for Philosophy of Law and Social Philosophy*, Supplementary Volume Part II, (1982), 129-140.
- B. Davidson. "Modal Trees for Modal Logics", *Logique et Analyse*, 97, (1982), 47-56.

Refereed Publications in Other Specialist Serials

- L. Chipman. "The Administrator, Pressure Groups, and the School Program", *Australian Council for Educational Administration (ACEA) Bulletin*, 23, (April, 1982), 16-32.

Refereed Publications in Non-specialist Serials

- L. Chipman. "Education and the Turning of the Tide - Response to C.B. Cox", *Quadrant*, xxvi:3, (1982), 28-31.
- L. Chipman. "Confessions of a Teacher Basher", *Quadrant*, xxvi: 5, (1982), 9-15.
- L. Chipman. "Secular Humanist Chickens", *Quadrant*, xxvi:7, (1982), 15-17.
- L. Chipman. "Stopping the Rot in Australia's Schools and Colleges", *Quadrant*, xxvii: 10, (1982), 52-61.

Commissioned Publication in Generally Non-refereed Specialist Philosophy Serials

- J.D. Mackenzie. Critical Notice (major book review) "C. Perelman, *Justice, Law and Argument*", *Bulletin of the Australian Society for Legal Philosophy* 24, (1982), 24-32

Commissioned Non-refereed Contributions to Specialist Reference Serials

- J.D. Mackenzie. Regular abstracts/reviews of papers on philosophical logic for *Zentralblatt Fur Mathematik*.

Conference Papers

- L. Chipman. "The Family and a Future Directed Social Philosophy", Invited keynote address, *Australian Family Association Conference*, ANU, Canberra, (May, 1982).
- L. Chipman. "Literacy and Australian Schools - Is There a Problem", Invited keynote address, *Australian Language Association Conference*, UNSW, Sydney, (August, 1982).
- B. Davidson. "Belief *de re* and *de se*", *Australasian Association of Philosophy (New Zealand Division) Conference*, Christchurch, N.Z., (May, 1982).
- B. Davidson, (with R. Pargetter, La Trobe University) "In Defence of the Dutch Book Argument", *Australasian Association of Philosophy Conference*, Melbourne, (August, 1982).
- J.D. Mackenzie. "A Dialogical Account of *Petito Principii*", *Australasian Association of Logic Conference*, Canberra, (1982).

Reports

- L. Chipman. *Report on Conscience and the Law in Australia*, Report to IVR World Congress, Caracas, Venezuela, (1982).

Research Interests and Major Topics of Investigation

Visible program execution.
 OPUS - A program understanding system.
 Algorithm design.
 Artificial intelligence.
 Data structures.
 Programming methodology.
 Microcomputer laboratory.
 Communications between Unix and the Univac MARKS System.
 Performance evaluation of operating systems.
 Cambridge ring.
 Robotics.
 Enrolment patterns in first year computing.
 Computer produced teaching aids.
 Text formatting.
 Automatic arrays.
 Applicative string processing.
 Program formatting.
 A rational pascal.
 Computer assisted structure elucidation.
 Interactive teaching aids.
 LISP System.

Monographs

- R.G. Dromey. *How to Solve It By Computer*, Prentice-Hall, Englewood Cliffs, N.J. (1982), 442 pages.
 R.G. Dromey. Chapter in *Handbook of Artificial Intelligence*, Vol III Chapter XIV, E.A. Feigenbaum and P.R. Cohan (Eds) Pitman, (1982).

Refereed Publications

- C.W. Crandell, N.A.B. Gray and D.H. Smith. "Structure Evaluation Using Predicted Carbon - 13 Spectra", *J. Chem. Inf. Comp. Sci.*, 22, (1982), 48-57.
 M.R. Lindley, N.A.B. Gray and D.H. Smith. "Applications of Artificial Intelligence to Chemical Inference, 40, Computerized Approach to the Verification of Carbon-13 Nuclear Magnetic Resonance Spectral Assignments", *J. Org. Chem.*, 47, (1982), 1027-1035.
 N.A.B. Gray. "Computer Assisted Analysis of Carbon-13 NMR Spectral Data", *Progress in Magnetic Resonance*, 15, (1982), 201-248.
 C. Djerassi, D.H. Smith, C.W. Crandell, N.A.B. Gray, J.G. Nourse, and M.R. Lindley. "The DENDRAL Project: Computational Aids to Natural Products Structure Elucidation", *Pure and Applied Chemistry*, 54, (1982), 2425-2442.
 M.C. Er. "A note on computing precedence functions", *Computer Journal*, Vol. 25, (1982), 397-398.
 P.A. Bailes. "An Applicative Language Framework for Data Abstraction", *Australian Computer Science Communications*, Vol 5, No. 1, (1982), 286-296.

Conference Papers

- P.J. McKerrow. "Build your Own Turtle Robot", *Proceedings of the Schools Symposium, Ninth Australian Computer Conference*, Hobart, (August, 1982), Invited Paper.

Reports and Other Publications

- T. Diettrich, R.M. London, I. Clarkson and R.G. Dromey. "Learning and Inductive Inference", *Stanford Computer Science Report*, No. STAN-CS-82-914.
- P.J. McKerrow. "Development of Computing Science Teaching Laboratories". *The Australian Computer Bulletin*, (November, 1982).
- I.G. Pirie. "Computing Courses in Australia". Fifth Edition, *Australian Computer Society*, Sydney, (1982).

Reports - Preprint Series

- 82-1 I.G. Pirie. "On Teaching of Computing in Schools".
- 82-2 R.F. Hille and T.F. Higginbotham. "A Display System for Pascal Programs Written in Pascal".
- 82-3 P.J. McKerrow. "Project Management by Checkpoint Control."
- 82-5 R. Reid. "Terminal Booking System on PE 3220."
- 82-4 P.J. McKerrow. "Development of Computing Science Teaching Laboratories".
- 82-7 P.J. McKerrow. "Microcomputers, Slotcars and Education."
- 82-8 R.F. Hille. "Stack Permutations and an Order Relation for Binary Trees".
- 82-9 P.J. McKerrow. "Logo and Turtle Robots."
- 82-10 P.J. McKerrow. "Computer Controlled Galvanizing."
- 82-11 A.T. Berziss. "Synchronization of Processes".
- 82-12 M.P. Shepanski. "SLOP - An Interactive Library Database System."
- 82-13 P.J. McKerrow. "Build your own Turtle Robot".
- 82-14 R.G. Dromey. "Exploiting Partial Order with Quicksort".
- 82-15 I.G. Pirie and L.G. Bridgen. "A Critique of Current CAL Research".
- 82-14 B.G. Hill. "The Execution of High Level Languages".
- 82-17 B.G. Hill. "Interactive Screen Preparation for Visible Program Execution".
- 82-18 R.F. Hille. "Program Development by Data Abstraction".
- 82-19 P.A. Bailes and A. Salvadori. "A Semantically-Based Formatting Discipline for Pascal".
- 82-20 P.A. Bailes. "A Rational PASCAL".

MATHEMATICS

Research Interests and Major Topics of Investigation

- Low Reynolds number fluid dynamics.
 High frequency ventilation in the lung, suspensions and flotation processes.
 Inlative combinatorial logic.
 NK type algebras.
 Two-dimensional water table variations due to tide, mean sea level shifts and beach front geometry.

- Calculation methods in quantum chemistry, particularly vibrational levels of small molecules.
- Viscous fluid dynamics.
- Biological fluid dynamics.
- Investigation of the forces acting on a slender body moving near an interface between two viscous fluids.
- Variations of the secretary problem.
- Sequential design of experiments.
- Generalization of random walk models.
- Diffusion in media with two diffusivities.
- Diffusion and moving boundaries.
- Solution of differential equations by means of one-parameter groups.
- Chebyshev polynomials in evaluating functions and solving ordinary and partial differential equations.
- Numerical linear algebra.
- Computer assisted learning (CAL).
- Seashell Mathematics.
- Unified field theory.
- Calculus of variations.
- Ship hull design.
- Geometry in nature.
- Further characterizations of polynomials.
- Finite systems of linear functional equations and equivalent systems of partial differential equations.
- Mathematics as applied to transport systems.
- Factorization of differential and difference operators.
- Invariant means of topological groups.
- Development of a theory of convergence in neighbourhood lattices.
- Introduction of a theory of dual continuity in topological spaces.
- A further investigation of continuous multi-functions with applications to differential equations.
- Random coefficient auto-regressions.
- Investigation of effects of time dependent changes in demographic parameters on populations.
- Growth models for various age and position dependent cell communities such as roots and leaves.
- Phyllotaxis.
- Wind forcing on high frequency edge waves.

Monographs

- J.M. Hill, *The Solution of Differential Equations by Means of One-Parameter Groups*, Pitman, London, (1982).
- D.F. Nicholls and B.G. Quinn, *Random Coefficient Autoregressive Models: An Introduction*, Springer-Verlag, New York, (1982).

Refereed Publications

- J.R. Blake, "Mechanics of ciliary transport", *Cell Mot. Suppl.*, 1, (1982), 41-46.
- P. Vann and J.R. Blake, "Mechanics of ovum transport in the oviduct", *Cell Mot. Suppl.*, 1, (1982), 53-58.
- D.C. Gibson and J.R. Blake, "The growth and collapse of vapour bubbles near a deformable surface", *Appl. Sci. Res.*, 38, (1982), 215-224.
- J.R. Blake and P. Cerone, "A note on the impulse due to a vapour bubble near a boundary", *J. Aust. Math. Soc.*, B23, (1982), 383-393.
- J.R. Blake, N. Liron and G.K. Aldis, "Flow patterns around micro-organisms and in ciliated ducts", *J. Theor. Biol.*, 98, (1982), 127-141.
- M.W. Bunder, "Predicate calculus of arbitrarily high finite order", *Archiv für Math Logik und Grundlagenforschung*, 22, (1982), 1-10.

- M.W. Bunder. "Relative combinatory logic without equality as a primitive predicate". *Notre Dame Journal of Formal Logic*, (1982), 62-70.
- M.W. Bunder. "Some results in Arzel-Feferman logic", *Zeitschrift für math Logik und Grundlagen der Mathematik*, 28, (1982), 1-9.
- D.J. Clarke and I.G. Eliot. "Description of littoral, alongshore sediment movement from empirical eigenfunction analysis", *Journal, Geological Society of Australia*, 29, (1982), 327-341.
- I.G. Eliot and D.J. Clarke. "Seasonal and biennial fluctuation in subaerial beach sediment volume on Warilla beach, New South Wales", *Marine Geology*, 48, (1982), 89-103.
- I.G. Eliot and D.J. Clarke. "Periodic variation in subaerial beach sediment volume on the South Coast of New South Wales", *Search*, 13, (1982), 205-207.
- I.G. Eliot, D.J. Clarke and A. Rhodes. "Beach width variation at Scarborough, Western Australia", *Journal, Royal Society of Western Australia*, 65, (1982), 153-158.
- I.G. Eliot and D.J. Clarke. "Temporal and spatial variability of the sediment budget of the subaerial beach at Warilla, New South Wales", *Australian Journal of Marine and Freshwater Research*, 33, (1982), 945-969.
- J.A. Lanyon, I.G. Eliot and D.J. Clarke. "Observations of shelf waves and bay seiches from tidal and beach groundwater level records", *Marine Geology*, 49, (1982), 23-42.
- J.A. Lanyon, I.G. Eliot and D.J. Clarke. "Groundwater level variation during semi-diurnal spring tide cycles on a sandy beach", *Australian Journal of Marine and Freshwater Research*, 33, (1982), 377-400.
- L.H. Liyanage, C.M. Gulati and J.M. Hill. "A bibliography on applications of random walks in theoretical Chemistry and Physics", *Advances in Molecular Relaxation and Interaction Processes*, 22, (1982), 53-72.
- L.H. Liyanage, J.M. Hill and C.M. Gulati. "A note on the random walk model arising in double diffusion", *Journal of the Australian Mathematical Society (Series B)*, 24, (1982), 121-129.
- J.M. Hill. "Finite deformation of thick-walled inner tubes and tyres under rotation and inflation", *Proceedings of the IUTAM Symposium on Finite Elasticity*, Lehigh University, Aug. 10-15 (1980), Martinus Nijhoff Publishers, The Hague, (1982), 211-236.
- J.M. Hill. "Reduced equilibrium equations for perfectly elastic materials", *Journal of Elasticity*, 12, (1982), 153-158.
- J.M. Hill. "The inflation of thick-walled inner tubes and tyres", *Journal of Applied Polymer Science*, 27, (1982), 11-19.
- J.M. Hill and M.E. Harr. "Elastic and particulate media", *Journal of the Engineering Mechanics Division, American Society of Civil Engineers*, 108, (1982), 596-609.
- J.M. Hill and A.J. Lee. "Solutions for water transport through plant tissue", Letter to the Editor of the *Journal of Theoretical Biology*, 95, (1982), 409-411.

- G.B. Davis and J.M. Hill. "A review of flow in fissured rocks and related phenomena", *Mechanics Research Communications*, 9, (1982), 115-120.
- G.B. Davis and J.M. Hill. "The classical moving boundary problem for the sphere", *Journal of the Institute of Mathematics and its Applications*, 29, (1982), 99-111.
- G.B. Davis and J.M. Hill. "A note on a diffusion-controlled moving boundary problem", *Chemical Engineering Science*, 37, (1982), 956-957.
- A.I. Lee and J.M. Hill. "A note on the solution of reaction-diffusion equations with convection", *Journal of the Institute of Mathematics and its Applications*, 29, (1982), 39-43.
- J.M. Hill. "A survey of the solved problems for rubber, Part I: Universal deformations", *International Journal of Mechanical Engineering Education*, 10, (1982), 129-140.
- J.M. Hill. "A survey of the solved problems for rubber, Part II: Partial and approximate solutions", *International Journal of Mechanical Engineering Education*, 10, (1982), 153-168.
- J.M. Hill. "On static similarity deformations for isotropic materials", *Quarterly of Applied Mathematics*, 40, (1982), 287-292.
- A.I. Lee and J.M. Hill. "On the general linear coupled system for diffusion in media with two diffusivities", *Journal of Mathematical Analysis and its Applications*, 89, (1982), 530-557.
- J.M. Hill. "Abel's differential equations", *Mathematical Scientist*, 7, (1982), 287-292.
- G.B. Davis and J.M. Hill. "Some theoretical aspects of oil recovery from fractured reservoirs", *Transactions of the Institution of Chemical Engineers*, 60, (1982), 352-358.
- C. Illert. "The mathematics of gnomonic seashells", *Mathematical Biosciences*, (1982).
- C. Illert. "Growth of South Australia Murex", *Of Sea and Shore*, 12(1), (1982), 8-10.
- C. Illert. "The significance of shell shape", *Of Sea and Shore*, 12(4), (1982), 205-207.
- P.G. Laird. "On an inverse problem in potential theory", *Applicable Analysis*, 13, (1982), 76-86.
- B.G. Quinn and D.F. Nicholls. "Testing for the randomness of autoregressive coefficients", *J. Time Series Anal.*, 3, (1982), 123-135.
- B.G. Quinn. "Stationarity and invertibility of simple bilinear models", *Stoch. Process. Appl.*, 12, (1982), 225-230.
- P. Cerone and K.P. Tognetti. "The asymptotic behaviour due to a piecewise time dependent net maternity function", *J. Austral. Math. Soc. (Series B)*, 23, (1982), 435-450.
- K.P. Tognetti and G. Winley. "Approximate solutions for coupled moment equations", *J. Austral. Math. Soc. (Series B)*, 24, (1982), 86-97.
- A.I. Lee and J.M. Hill. "On the solution of boundary value problems for fourth order diffusion", *Acta Mechanica*, 95, (1982).

Conference Papers

- M.W. Bunder. "BCK and related algebras and their corresponding logics", presented at the *Australian Mathematics Society Conference*.

- M.W. Bunder. "A formal metatheory in which Gödel's first but not his second incompleteness theorem can be formalised", presented at *Australasian Association for Logic Conference*.
- G.B. Davis and A.I.M. Ritchie. "A mathematical model of pyritic oxidation in waste rock dumps", *Proceedings of 5th Conference of the Simulation Society of Australia*, Armidale, (May, 1982), 137-141.
- P.G. Laird. "Systems of linear functional equations", presented at the *Miniconference on Analysis*, University of Newcastle.
- P.G. Laird. "Polynomial properties", presented at the *Australian Mathematical Society Conference*, University of Newcastle.
- P.G. Laird. "Southern and Western New South Wales Coal Transport", presented at the *Fourth Conference of Australian Institutes of Transport Research*, Macquarie University.
- F.P. Prokop. *Spring Topology Conference*, U.S. Naval Academy, (March, 1982). "Pre-neighbourhood ω -semi-lattices, neighbourhood lattices and their associated continuous functions".
Written by: F. Prokop. Presented by: Prof. J.C. Abbott.

Reports

- M.W. Bunder. "A comparison of Australian Mathematics Departments", *Australian Mathematics Gazette*, 9 (1), (1982), 31.
- M.W. Bunder. "Another solution to Problem 4(b) in the 1980 ALTA Logic Competition Year 11", *Australian Logic Teachers Journal*, 6, (1982), 30.
- A.J. Lee and J.M. Hill. "On the solution of reaction-diffusion equations with convection", Preprint No. 8/82.
- R.V. Nilsen and P.J. Browne. "On difference operators and their factorization", submitted to *Canadian Journal of Maths*, (30p).
- K.P. Tognetti. "Tree lovers and burning" in "Bush Fire Control - Management by Fire", Proceedings of a conference held October 30, 1981, published by University of Wollongong.

Reports - Preprint Series

- 82-1 J.M. Hill. "The Solution of Differential Equations by Means of One-Parameter Groups".
- 82-2 C. Illert. "The Mathematics of Gnomonic Seashells".
- 82-3 M.W. Bunder. "BCK and related algebras and their corresponding logics".
- 82-4 M.W. Bunder. "A Formal Metatheory in which Gödel's First, but not his Second Incompleteness Theorem can be proved".
- 82-5 F.P. Prokop. "Pre-Neighbourhood ω -semi-lattices and Neighbourhood Lattices".
- 82-6 P. Cerone and J.R. Blake. "Streamlines, Pathlines and Pressure Contours for a Cavitation Bubble near a Free Surface and a Rigid Boundary."
- 82-7 M.W. Bunder. "The Proof of Lindenbaum's Lemma Cannot be Formalized".
- 82-8 A.J. Lee and J.M. Hill. "On the Solution of Reaction-Diffusion Equations with Convection".

- 82-9 B.G. Quinn. "A Note on the Existence of Strictly Stationary Solutions to Bilinear Equations".
- 82-10 M.W. Bunder. "The Answer to a Problem of Iseki on BCI-Algebras".
- 82-11 M.W. Bunder. "Every Commutative BCI-Algebra is a Commutative BCK-Algebra".
- 82-12 C.Jillert. "The Mathematics of Conchological Clock-Springs".
- 82-13 M.W. Bunder. "Some Weak Subsystems of BCK-Algebra".
- 82-14 M.W. Bunder. "Iseki's Condition and Commutative BCK-Algebras".
- 82-15 M.W. Bunder. "The Unprovability of Cornish's Condition (J) in BCK-Algebras".
- 82-16 M.W. Bunder. "On Quasi-Commutative BCK-Type Algebras".
- 82-17 "Department of Mathematics Annual Report 1981".
- 82-18 D.J. Clarke and I.G. Eliot. "Mean Sea Level and Beach Width Variation at Scarborough, Western Australia".
- 82-19 M.W. Bunder. "On Arruda and da Costa's Logics \mathcal{J}_1 to \mathcal{J}_5 ".
- 82-20 The Department of Mathematics. "Mathematics IA Reports 1979-1981".
- 82-21 M.W. Bunder. "Order of Strength Relations between Formal Systems with Applications to Metamathematics".
- 82-22 A.L. Worthy. "Generation of High Frequency Edge Waves on a Sloping Shelf".
- 82-23 M.W. Bunder. "A Strong Absolute Consistency Proof for Some Systems of Combinatory Logic and Set Theory".
- 82-24 D.J. Clarke, J.R. Frew and I.G. Eliot. "Nearshore Bar Patterns on a Small, Sandy Beach".
- 82-25 D.J. Clarke and I.G. Eliot. "Patterns of Beach Change Identified from Empirical Orthogonal Function (Eigen-Function) Analysis: A Colligation of Results".
- 82-26 E.T. Hannan and B.G. Quinn. "Line Splitting".

Research Interests and Major Topics of Investigation

- Animal physiology and behaviour.
 Ecology.
 Microbial physiology and biochemistry.
 Plant physiology and biochemistry.

Monographs

- A.J. Hulbert. "Notes on the management of a captive breeding colony of the Greater Bilby *Macrotis lagotis*", in D.D. Evans (ed), *The Management of Australian Mammals in Captivity*, Melbourne, (1982).
- W. Reynolds and A.J. Hulbert. "Cold acclimation in a small dasyurid marsupial: *Antechinus stuartii*", in M. Archer (ed), *Carnivorous Marsupials*, Sydney, (1982).

Refereed Publications

- A.D. Brown and A. Duong. "State of water in extremely halophilic bacteria. Heat of dilution of *Halobacterium halobium*", *J. Membrane Biol.*, 64, (1982), 187-193.
- A.D. Brown, R.McC. Lilley and T. Marengo. "Osmoregulation in *Dunaliella*. Intracellular distribution of enzymes of glycerol metabolism", *Z. Naturforsch.*, 37c, (1982), 1115-1123.
- A.H. Burdige and R.J. Whelan. "Seed Dispersal in a Cycad, *Macrozamia riedelii*", *Aust. J. Ecol.*, 7, (1982), 65-67.
- P. Hazell and D.R. Murray. "Peroxidase Isoenzymes and Leaf Senescence in Sunflower, *Helianthus annuus* L.", *Z. Pflanzenphysiol.*, 108, (1982), 87-92.
- D.M. Howarth and T.R. Grant. "Species diversity of waterbirds on Lake Illawarra, Coomaditchy Lagoon and the Cordeaux Storage Dams, New South Wales", *Emu* 82, (1982), 106-108.
- D.M. Howarth, T.R. Grant and A.J. Hulbert. "A Comparative study of heavy metal accumulation in tissues of the crested tern, *Sterna bergii*, breeding near an industrial port before and after harbour dredging and ocean dumping", *Aust. Wildlife Res.*, (1982), 571-577.
- A.J. Hulbert and M.L. Augée. "A Comparative study of thyroid function in monotreme marsupial and eutherian mammals." *Physiol Zool.* 55, (1982), 220-228.
- R. McC. Lilley, M. Stitt, G. Mader and H. Heldt. "Rapid fractionation of wheat leaf protoplasts using membrane filtration. The determination of metabolic levels in the chloroplasts, cytosol and mitochondria", *Plant Physiology*, 70, (1982), 965-970.
- D.R. Murray. "Proteolysis in Cotyledon Cells of *Phaseolus Vulgaris* L. Mobilization of Glycoproteins following Germination", *Z. Pflanzenphysiol.*, 108, (1982), 17-25.
- D.R. Murray and F. Vairinhos. "Albumins from Pns Seeds are Distinct from Vicilin", *Z. Pflanzenphysiol.*, 106, (1982), 465-8.
- D.R. Murray and F. Vairinhos. "The Occurrence of Disulphide-Linked Polypeptides in Helianthus, the Major Reserve Globulin of Sunflower Seed", *Z. Pflanzenphysiol.*, 108, (1982), 181-5.

- D.R. Murray and F. Vairinhos. "The Seed Proteins of *Abrus precatorius* L.", *Z. Pflanzenphysiol.*, 108, (1982), 471-6.
- H. Spencer. "A Microvolume molecular filter." *Experientia* 38, (1982), 519-520.
- H. Spencer. "A pen vibrator adapter to increase the sensitivity of an ink-writing kymograph.", *The Physiologist*, 25, No. 5., (1982), 437-438.
- M. Stitt, R. McC. Lilley and H. Heldt. "Adenine nucleotide levels in the cytosol, chloroplasts, and mitochondria of wheat leaf protoplasts", *Plant Physiology*, 70, (1982), 971-977
- F. Vairinhos and D.R. Murray. "Changes in Polypeptide Composition During Seed Development in Chickpea, *Cicer arietinum* L.", *Z. Pflanzenphysiol.*, 106, (1982), 447-52.
- F. Vairinhos and D.R. Murray. "Variation in the Sizes of Both Large and Small Disulphide-Linked Subunits of Legumin in Representatives of Viciae and Cicer", *Z. Pflanzenphysiol.*, 107, (1982), 25-32.
- R.J. Whelan. "Response of Slugs to Unacceptable Food Items", *J. Appl. Ecol.*, 19, (1982), 79-87.
- R.J. Whelan, "An Artificial Medium for Feeding Choice Experiments with Slugs", *J. Appl. Ecol.*, 19, (1982), 89-94.

Conference Papers

- A.J. Hulbert and T.R. Grant. "A seasonal study of body condition and water turnover in a free-living population of platypuses", *26th Scientific Meeting of the Australian Mammal Society*, Canberra, (May, 1982).
- R. McC. Lilley, M. Stitt and H.W. Heldt. "Determination of adenine nucleotide levels in the mitochondria, cytosol and chloroplasts of plant protoplasts.", *Second European Bioenergetics Conference*, Lyon, France, (July, 1982).
- D.R. Murray. "The Seed Proteins of Cowpea, *Vigna unguiculata* (L.) Walp.", *Seed Protein Workshop*, Canberra, (November, 1982).
- R.J. Whelan. "Fire in Florida", *ANZAAS Conference*, Sydney, (August, 1982).

Reports

- H. Spencer (ed). "Bushfire control or management by fire?" *University of Wollongong, 1982 Proceedings of the First Bushfire Symposium*, (October, 1981).

CHEMISTRY

Research Interests and Major Topics of Investigation

- Computers and chemistry.
- Environmental and analytical chemistry.
- Hydrolysis of metal ions in aqueous solution.
- The chemistry and possible mutagenicity of welding fume.
- Biochemical prospecting for gold.
- Analytical procedures for shale oils.
- Analysis of hydrotreated shale oil.
- The synthesis and investigation of transition metal complexes as models of biologically important sites.
- Techniques of objective error assessment in computing the energy changes following geometry changes.
- Analysis and investigation of the H_2-H_2 van der Waals interaction.
- Accounting for the observed energy of the excited $(\pi+\pi^*)$ electronic state of unsaturated moieties such as C^*H_2 and C^*H_2S .
- Computation of the vibration-rotation spectrum of triatomic ions such as H_3^+ .

Monographs

- A.J. Fiebig, P.G. Burton and C. Wiecek. *Basic Concepts in Chemistry, Volume 1 Science*, (1982).

Refereed Publications

- P.L. Brown, J. Ellis and R. Silva. "Hydrolysis of Metal Ions. IV. Indium III". *J. Chem. Soc., Dalton*, (1982), 1911-1914.
- P.G. Burton. "The Role of Accurate Ab Initio Calculations in the Determination of the Repulsive Wall of the He-He Potential", *Chem. Phys. Lett.*, 87, (1982), 101-104.
- P.G. Burton and U.E. Senff. "The $(H_2)_2$ Potential Surface and the Interaction Between Hydrogen Molecules at Low Temperatures", *J. Chem. Phys.*, 76, (1982), 6073-6087.
- P.G. Burton, P.D. Gray and U.E. Senff. "Basis Set Refinement in Theoretical Modelling of Molecular Electronic Structures", *Molecular Physics*, 47, (1982), 785-811.
- P.G. Burton. "Comments on 'Intermolecular Bonding' by J.A. Pople", *Faraday Discussion*, 73, (1982), 109.
- P.G. Burton. "Comment on 'Rotationally Inelastic Scattering of Hydrogen Molecules and the Non-Spherical Interaction' by U. Buck", *Faraday Discussion*, 73, (1982), 275-276.
- P.G. Burton. "Comment on 'Energetics and Dynamics of Large van der Waals Molecules: Aromatics-Rare Gases' by J. Joetner, A. Amirav, U. Even, S. Leutwyler, M.J. Ondrechen and Z. Berkovich-Yellin", *Faraday Discussion*, 73, (1982), 181.
- P.G. Burton. "Comment on 'Dimer Spectroscopy' by J. Geraedts, M. Waayer, S. Stotte and J. Reuss", *Faraday Discussion*, 73, (1982), 413-415.
- E. Gellert. "The Indolizidine Alkaloids", *J. Nat. Prod.*, 45, (1982), 50-73.
- F.M. Hall and A. Finch. "Standard Enthalpies of Formation and Lattice Energies of Alkylammonium Halides. Part I - Propylamine Hydrochlorides", *J. Chem. Soc. Dalton Trans.*, (1982), 915.
- J. Land and J. Ellis. "Oxidation of Aqueous Phenol Solutions in the Presence of Polyelectrolytes", *Water Research*, 16, (1982), 1139-1145.
- R.P. Philp and P.T. Crisp. "Surface Geochemical Methods Used for Oil and Gas Prospecting: a Review", *J. Geochem. Expl.*, 17, (1982), 1-34.
- C.J. Proctor, C.J. Porter, T. Ast, P.D. Bolton and J. Beynon. "Charge Stripping Reactions of Ions Formed from Methane, Ammonia, Water and Hydrogen Sulphide by Protonation and by Electron Impact", *Org. Mass Spectrometry*, 16, (1981), 454-458.
- R. Regtop, P.T. Crisp and J. Ellis. "Chemical Characterisation of Shale Oil from Rundle, Queensland", *Fuel*, 61, (1982), 355-357.

Conference Papers

- G.A. Brewer, G.M. Mockler and E. Sinn. "Asymmetric Schiff Base Ligands". *184th American Chemical Society Meeting at Kansas City, Missouri*, (September 12-17th 1982), Paper INOR 20.
- G.A. Brewer, G.M. Mockler and E. Sinn. "Oxygen and Imidazole Bridged Homo- and Heterobimuclear and Trinuclear Complexes from Unsymmetrical Schiff Base Ligands". *14th Southeastern American Chemical Society Meeting at Birmingham, Alabama*, (November, 1982), Paper 262.

- G.A. Brewer, G.M. Mockler and E. Sinn. "Oxygen and Halogen Bridged Tetranuclear and Polynuclear Transition Metal Complexes from Symmetrical and Unsymmetrical Schiff Bases", 34th Southeastern American Chemical Society Meeting at Birmingham, Alabama, (November, 1982), Paper 264.
- R. Tandon, P.T. Crisp, J. Ellis and R.S. Baker. "An Automatic A.C. Arc Welder and Fume Collection System for the Chemical Investigation of Welding Fume and its Potential Health Effects", *Aust. Welding Inst. 30th Ann. Conv.*, Hobart, (October, 1982).
- F. Gellert and O.C. Wong. "Synthesis of Dihydroisoindole Derivatives", *RACI Organic Chemistry Symposium*, University of Sydney, (December, 1982).
- P.G. Burton and U.E. Senff. "New Theoretical Potentials for the H_2-H_2 van der Waals Interaction", *Royal Society Faraday Discussion*, Oxford, (1982), 4th International Quantum Chemistry Congress, Uppsala, (1982), and *RACI 7th National Convention Canberra*, (1982).
- P.G. Burton. "The Nature of the Interactions in $He-H_2$ and H_2-H_2 ", *German Physical Society (Verh.Dtsch. Phys. Ges. 17, 430) Würzburg*, (1982).
- P.G. Burton. "Atomic Orbital Basis Sets for Accurate Ab-Initio Calculations", *SFB42 Colloquium (Invited) Wuppertal*, (1982).
- P.G. Burton. "Error Analysis in the Electronic Wavefunction Computation of the H_2-H_2 Interaction Potential", *Symposium on Electron Correlation in Molecular Systems (Invited) Orenas*, (1982).
- P.G. Burton, E. Von Nagy Felsobuki, M.K. Hamilton and G. Doherty. "Theoretical Confirmation of the K_3+ Vibrational Fundamental from First Principles and Prediction of the Low Lying Vibrationally Excited Energies of H_3+ and D_3+ ", *13th Australian Spectroscopy Conference*, Melbourne, (1982).

Reports

- P.T. Crisp. "Chemical and Physical Analysis of Atmospheric Aerosol Particles in the Wollongong-Port Kembla Region", *Annual Report to the State Pollution Control Commission of NSW*, (1982), 137 pp.
- A.J. Fielding, P.G. Burton and L.G. Bridgen. "Valence Electrons and Periodicity: A Sequence of Programmed Instruction for Chemistry", (1982).

GEOLOGY

Research Interests and Major Topics of Investigation

- Coal carbonization.
- Maturation and source-rock studies in Australian sedimentary basins.
- Petrology of low rank oil shales.
- Strata control - stress/strain studies in the Southern Coalfield, New South Wales using reflectance and anisotropy of magnetic susceptibility.
- Studies of uranium - bearing rocks, Amadeus and Ngalia Basins, Northern Territory.
- Petrogenesis of gneisses, Broken Hill, New South Wales.
- Biostratigraphy of the Capertree High, New South Wales.
- Ordovician faunas of New Zealand.
- Permian igneous rocks of the southern Sydney Basin.
- Mineralogy of industrial materials.
- Geology of the Windellama - Marulan region, New South Wales.
- Sedimentological studies in the Illawarra Region.

Monographs

- I.D. Blayden, P.G. Goodwin. *Exploration strategy. Coal basin exploration - strategies, methods, analytical programmes and case histories*, University of Wollongong, Wollongong, (1982), 141 pages.

A.C. Cook, (with contributions from A.J. Kantsler). *The origin and petrology of organic matter in coals, oil shales and petroleum source-rocks*. *Ibid.*, (1982), 106 pages.

B.G. Jones. *Cool Basin settings and environments*. *Ibid.*, (1982), 40 pages.

Refereed Publications

M. Smyth, and M. Cameron. "Organic petrology and source rock potential of sediments in the Eromanga Basin, South Australia", *Abst. Geol. Soc. Aust.*, 3, 62, (1981).

A.C. Cook. "What are we trying to separate?", *Separation Science and Technology*, 16, (1981), 1545-1569.

P.F. Carr, B.G. Jones, and A.J. Wright. "Discussion: A radiometric time scale of the Triassic", *J. Geol. Soc. Aust.*, 29, (1982), 247-249.

A.C. Hutton. "Geology of the Bullio area, New South Wales", *Proc. Linn. Sci. N.S.W.*, 105, (1982), 307-320.

A.J. Wright, G.D. Powis, and P.F. Carr. "Zeolitised Permian fossils from the southern Sydney Basin", *N. Jh. Geol. Pal. Mn.* 6, (1982), 367-74.

C.E. Pritchard, T. Quinlan, B.G. Jones, L.A. Offe, J.C. Wilkie, C.K. Mawer, V. Hirsinger and C. Knight. "1:100,000 Geological Series Map Sheet 5550 - MacDonnell Ranges". *Bur. Miner. Resour. Aust.*, (1981), Prelim. Ed.

B.G. Jones and R.A. Facer. "CORRMAT/PROB, a program to create and test a correlation coefficient matrix from data with missing values", *Comput. Geosci.*, 8, (1982), 191-198.

A.C. Cook. "Organic facies in the Eromanga Basin", In Moore, P.S. & Mount, T.J. (compilers), *Eromanga Basin Symposium. Summary Papers*. Geol. Soc. Aust. and Pet. Explor. Soc. Aust., Adelaide, (1982), 234-57.

A.J. Kantsler, A.C. Cook, and M. Zwigulis. "Maturation patterns in the Eromanga Basin", *Ibid.*, (1982), 284-95.

Conference Papers

B.G. Jones, K. Ferguson, and B. Wygrala. "Tectonic influence on Late Devonian sedimentary facies, northern Amadeus Basin, Northern Territory", *Abst. Geol. Soc. Aust.*, 3, (1981), 35.

M. Smyth, and M. Cameron. "Organic petrology and source rock potential of sediments in the Eromanga Basin, South Australia", *Abst. Geol. Soc. Aust.*, 3, (1981), 62.

P.F. Carr. "Late Permian shoshonitic volcanism in the southern Sydney Basin", *Abst. Geol. Soc. Aust.*, 7, (1982), 9.

B.G. Jones, B.R. Rust. "The Hawkesbury Sandstone of New South Wales, Australia: Triassic deposits of a large braided - fluvial system", *Internat. Assoc. Sedimentol. abstr. Modern and ancient fluvial systems: sedimentology and processes*, University of Keele, (1981), 62.

PHYSICS

Research Interests and Major Topics of Investigation

Astronomy.
Atomic and molecular Physics.
Musical acoustics.
Nuclear Physics.
Solid state Physics.
Spectrophotometry.

Monographs

"The Acoustics of Stringed Musical Instruments". Proceedings of the Wollongong Co-Operative Workshop, presented under the auspices of the Department of Physics and the Catgut Acoustical Society (Ed. A.J. Segal, 1982).

Refereed Publications

- K.C. Mishra, K.J. Duff and T.P. Das. "New Values of Quadrupole Moments of Fluorine Nuclei", *Phys. Rev. B*, 25, (1982), 3389-3391.
- R. Sooryakumar and P.E. Simmonds. "Resonant Brillouin Scattering in GaAs under Uniaxial stress", *Solid State Commun.* 42, (1982), 287-291.
- P.J. Williams, L. Eaves, P.E. Simmonds, M.O. Henry, E.C. Lightowers and Ch. Uihlein. "High Resolution Optical Absorption Spectroscopy on Cr-related Defects in GaAs and GaP", *J. Phys. C.*, 15, (1982), 1227-1343.
- K.J. Duff. "Some Theorems Concerning Group Representations Generated by Determinantal Wavefunctions", *Aust. J. Phys.*, 35, (1982), 401-407.
- P.E. Simmonds, H. Venhaus and R. Sooryakumar. "Electron and Hole g-Factors from Magneto-luminescence in ZnTe and CdTe", *Solid State Commun.*, 43, (1982), 311-314.
- K.J. Grant, P. Fisher, M. Kosaka and A.D. Martin. "Removal of Channelled Spectra Signatures in Fourier Spectroscopy", *Aust. J. Phys.* 35, (1982), 709-714.
- E.H. Salib, K.J. Duff, P. Fisher and P.E. Simmonds. "Piezospectroscopy of the Triple Acceptor Neutral Copper in Germanium", *Solid State Commun.*, 44, (1982), 81-84.
- R. Sooryakumar and P.E. Simmonds. "High Resolution Resonant Brillouin Scattering in GaAs and CdTe and the Effect of Uniaxial Stress", Proceedings of the Sixteenth International Conference on the Physics of Semiconductors, (1982).
- B.R. Wade and P. Inyat. "A Digital Encoding System created for the 18" Telescope", *Proc. Astr. Soc. Aust.*, 4, (2), (1981), 254-256.
- L.F. Smith. "Wolf-Rayet Stars: Observations, Physics, Evolutions", *IAU Symposium 99*, Reidel (Symposium Summary), (1982), 597-603.

Conference Papers

- C.A. Freeth, G.C. Jones and R.W.G. Syme. "The Transverse Zeeman Effect in Calcium Fluoride Crystals Containing Erbium", *Sixth Annual Aust. Institute of Physics Solid State Physics Meeting*, Wagga, (February, 1982).
- A.D. Martin, C.A. Freeth, M. Kosaka, P. Fisher and P.E. Simmonds. "Quantitative Piezo-Zeeman Spectroscopy of Group III Acceptors in Germanium", *ibid.*
- P.E. Simmonds, R. Sooryakumar and M. Cardona. "Resonant Brillouin Scattering and Uniaxial Stress Effects of Polaritons in GaAs", *ibid.*
- E.H. Salib, K.J. Duff, P. Fisher and P.E. Simmonds. "Piezospectroscopy of Group I Impurities in Group IV Semiconductors", *ibid.*
- K.C. Mishra, T.P. Das, A. Coker and K.J. Duff. "Study of Fe^{+2} -UO Interaction in Acceptor of Bacterial Reaction Center - Interpretation of Mossbauer Data", *Bull. Am. Phys. Soc.*, 27, (1982), 255.

- K.J. Duff, P. Fisher, C.A. Freeth, A.D. Martin, E.H. Salib and P.E. Simmonds. "Theoretical and Experimental Results of Piezospectroscopic Effects for Acceptors in Germanium", *Fifth National Physics Congress of the Aust. Inst. of Physics*, Aust. Nat. Univ., Canberra. (August, 1982).
- A.J. Segal. "The Influence of Certain Parameters on the 'Tone' of Bowed-String Instruments". *The Wollongong Co-operative Workshop on the Acoustics of Stringed Musical Instruments*, (August, 1980).

Research Interests and Major Topics of Investigation

- Classificatory ability in Australian children.
- Cognitive development of minority groups.
- Convergent, divergent and operational thinking among white and Aboriginal children.
- Curriculum theory and development.
- Effects of mass media on children.
- Enrichment programs for disadvantaged preschoolers.
- Instructional design and evaluation.
- Learning: how and why it occurs.
- Politics in education.
- Migrant education through the media.
- Schooling and social class.
- Socialization of children, migrants and minority groups.
- Open education.
- Work preparation of the mildly mentally retarded.
- The psychosociology of teacher development.
- Curriculum development in higher education.
- Women in higher education.
- Australian History of Education.
- Educational evaluation.
- Sociology of language and education.
- Oral language, literacy and educational success.
- Analysis of educational views of prominent contemporary thinkers.
- Popper on education.
- Relating philosophy of education to educational administration and policy.

Monographs

- A.J. Fielding, P.G. Burton and C. Wiecek. *Basic Concepts in Chemistry, Volume I*. Sydney, (1982).
- P. Hamilton, "Irish Catholic Immigration and the State, 1840-1860", Chapter 1 in Sydney Labour History Group, *What Rough Beast? The State and Social Order in Australian History*, Sydney, (1982).

Refereed Publications

- D.M. Cavanagh. "The merging of Institutions: Contextual Decisions and Teacher Training", *The Australian Journal of Teacher Education*, 7:2, (1982), 1-5.
- D.M. Cavanagh. "National Testing and Testing: A Confusion of Priorities", *Curriculum Perspectives*, 2:3, (1982), 81-85.
- D.M. Cavanagh and A.J. Fielding. "Teacher Training and Education in the 1980's" in J. Zarfa (ed.), *Education and Society in 1980's: A Comparative Analysis*, Proc. of the Australian Comparative and International Education Society, Melbourne, (1981), 307-314.
- D.J. Corson. "The Graeco-Latin (G-L) Instrument: a new measure of semantic complexity in oral and written English", *Language and Speech*, 25:1, (1982), 1-10.
- D.J. Corson. "The Graeco-Latin Lexical Bar", *Hesperiam, The Journal of the Joint Association of Classical Teachers*, 4, (1982), 49-59.
- D.J. Corson. "The priority of words in meaning", *Working Papers in Language and Linguistics*, 13, 8-27.

- P.R. de Lacey. "Social realism in multicultural education for young children", *Australian Journal of Early Childhood*, 7, (1982), 20-25.
- J.M. Jones and F.H. Lovejoy. "Comment - A Reply to R. Over's paper 'Australian Universities: Discrimination Against Women Academics'", *Signs, Journal of Women in Culture and Society*, (1982), 390-91.
- R.C. King. "For we know in part and we prophesy in part ...", *Australian Psychologist*, 17:1, (1982), 9-29.

Conference Papers

- D.M. Cavanagh. "Change, Cooperation and Coordination: Case Study in Program Development", *Annual Conference of the South Pacific Association for Teacher Education*, Melbourne, Victoria, (1982).
- D.J. Corson. "Social Dialect, the Semantic Barrier and Access to Curricular Knowledge", *Educational Research in the 1980s Collected Papers*, Australian Association for Research in Education Annual Conference, Brisbane, (1982), 485-490. to appear in *Language in Society*, 12, (London, New York, 1983), 213-222.
- D.J. Corson. Fourth South Coast Summer School in Computing, The University of Wollongong - Panel member: "Computers in Education", (December, 1982).
- D.J. Corson. "Social Dialect, the Semantic Barrier and Access to Curricular Knowledge", Submission to Senate Standing Committee on Education and the Arts - *National Language Policy*, (1982).
- D.J. Corson. "The Case for Oral Language in Schooling", Submission to Senate Standing Committee on Education and the Arts - *National Language Policy*, (1982). To appear in *Elementary School Journal*, 84, (Columbia/Missouri, 1984).
- P.R. de Lacey. "Deficit, Difference and a Pragmatic Deficit Approach to Schooling for Minorities", read before *Ethnic Politics Conference*, A.N.U., Canberra, (December, 1982).
- P.R. de Lacey. "Report on Multicultural Education", requested by *Victorian Catholic Education Board*, (1982).
- A.J. Fielding. "Towards a Theory of Professional Teacher Development", *London Association of Comparative Educationists*, London University, (November, 1982).
- J.M. Jones and J. Castle. "Women in Australian Universities, 1945-80", *S.A.A.N.Z. Annual Conference*, Sydney, (August, 1982).
- J.M. Jones. "Reciprocity between School Teachers and their Pupils", *S.A.A.N.Z. Annual Conference*, Sydney, (August, 1982).
- R.C. King. "Institutional Amalgamations and the Pattern of Organisation of Australian Tertiary Education: A Problem of Chickens and Eggs", *Conference on Reorganisation of Tertiary Education in Australia*, Toowoomba, Queensland, (1982).

Reports

- R.C. King, assisted by I.M. Southall. "Evaluation of Special Education Grants to Australian Universities and Colleges of Advanced Education, 1974-5", Wollongong, (1982).

Research Interests and Major Topics of Investigation

- Erosion, transportation and deposition of beach sands.
- Problems of agricultural development.
- Monitoring of the patterns and processes of urban growth and decline in non-metropolitan Australia.
- Processes of river channel formation and changes.
- The impact of containerisation on port operations and structure in the developing countries of Asia.
- Changing levels and patterns of birth rates in New South Wales.
- The evolution of the Eastern Highlands, the development and chronology of alluvial landforms and environmental problems.

Monographs

- E. Dayal. "Modernization of Agriculture in Uttar Pradesh - India", in P. Pandey (ed.), *Themes in Modern Geography: A Focus on India*, Patna, India, (1982).

Refereed Publications

- D. Black. "The Vegetation of the Boyd Plateau N.S.W.", *Vegetatio* 50, (1982), 93-111.
- E.A. Bryant. "Foreshore Sediment Transport Mechanisms on Reflective and Dissipative Beaches, Broken Bay, Australia", *Journal of Sedimentary Petrology*, 52, (1982), 431-50.
- G.C. Nanson and K. Page. "Lateral Accretion of Fine Grained Concave Benches on Meandering Rivers", *Special Publication of the International Association of Sedimentologists*, 6, (1982), 1-11.
- K. Page and G.C. Nanson. "Concave Bank Benches and Associated Floodplain Formation", *Earth Surface Processes and Landforms*, 7, (1982), 529-543.
- R.W. Young and I. McDougall. "Basalts and Siltstones on the Coast near Ulladulla, Southern New South Wales", *Journal Geological Society of Australia*, 29, (1982), 425-30.
- R.W. Young and G.C. Nanson. "Terrace Formation in the Illawarra Region of New South Wales", *Australian Geographer*, 15, (1982), 212-219.
- R.W. Young. "The Antiquity of the Eastern Uplands: Lessons from the Australian Landscape", *Geography Bulletin*, 14, (1982), 49-51.

Conference Papers

- F.A. Bryant. "Foreshore Changes at Stanwell Park Beach 1890-1980", *Australian Geomorphology Conference*, Robertson, (1982).
- E.J. Hickin and G.C. Nanson. "An Empirical Model of Meander Migration", *Australian Geomorphology Conference*, Robertson, (1982).
- M.G.A. Wilson. "The Changing Pattern of Fertility in Non Metropolitan New South Wales, 1966-76", *Section 71 (Geographical Sciences)*, ANZAAS, Macquarie University, (1982).

Reports and other Publications

- G.C. Nanson, D. Black, K. Mills and N.H. Robinson. "Environmental Impact Assessment, South Coast Coal Investigation District", prepared for the New South Wales Electricity Commission, (1982), 62 pages.
- G.C. Nanson. "An Investigation of Possible River Erosion of the High Bank of the Nepean River from Victoria Bridge to McCann's Island", prepared for the *Perrith Lakes Development Corporation* (1982), 35 pages.

F. A. Bryant. "Lake Illawarra Doze", prepared for the Illawarra Lake Management Committee, (1982).

PSYCHOLOGY

Research Interests and Major Topics of Investigation

- Ergonomic analysis of industrial injuries.
- Organizational communication and problem solving.
- Drug rehabilitation and community action.
- Automaticity in visual perception.
- The application of "Automaticity" to the understanding of Dyslexia.
- Individual differences in mental imagery.
- The application of evoked cortical responses in the investigation of children with minimal brain dysfunction.
- Gestalt therapy.
- Holistic health.
- Transpersonal Psychology and consciousness.
- Development of personal constructs.
- T-wave amplitude and heart rate changes as a function of cognitive stress in individuals differentially sensitive to such stress.
- Cognitive and Psychodynamic foundations of morality.
- Phenomenological constructions of aggression in parents and their children.
- Significance of differences in styles of childbearing as between mothers and fathers.
- Self-identity in adolescents.
- Bronchial asthma.
- Imagery and disease.
- Concepts of "Psychology" in Social Psychology textbooks.
- A theory of actors.
- On (chiefly human) behaviour.
- Limits on certainty.
- Decision making in relation to counselling psychology.
- Computer applications to psychological tests and their interpretation.
- Coping with chronic illness.
- An evaluation of crisis intervention counselling with hospitalized patients.
- Men in transition.
- Content analysis of dialogue.
- An exploration of traits in situational contexts.
- Women's Studies Courses in Australia.

Refereed Publications

- A.M. Clarke and L.M. Birt. "Evaluative reviews in universities: The influence of public policies", *Higher Education*, xi, (1982), 1-26.
- D.D. Diespecker. "The end of nineteenth-century psychology", *The Australian Journal of Transpersonal Psychology*, iii, (1982), 127-142.
- D.D. Diespecker. "Applied imagery", *The International Journal of Eclectic Psychotherapy*, iii, (1982), 1-10.
- S. Ginsberg. "Effect of attentional and neutral instructions and of forward and backward conditioning analogs on response to change from paired stimulus repetition: More evidence relevant to the role of orienting reaction recovery in short-interval classical autonomic conditioning", *Biological Psychology*, xv, (1982), 33-48.
- P.M. Henry. "The socialization of aggression in five-year old boys", *Journal of Genetic Psychology*, 141, (1982), 105-113.
- L.L. Viney. "Psychological reactions of men and women to severe illness: A note for health care professionals", *Australian Clinical Psychologist*, i, (1982), 19-24.
- L.L. Viney and M.T. Westbrook. "Patterns of anxiety in the chronically ill", *British Journal of Medical Psychology*, 55, (1982), 82-95.

- L.L. Viney and M.T. Westbrook. "Coping with chronic illness: The mediating role of biographic and illness-related factors", *Journal of Psychosomatic Medicine*, xxvi, (1982), 595-602.
- C. Preston, L.L. Viney and M.T. Westbrook. "I'm lucky: I have only one needle a day", *Diabetic Conquest*, (August, 1982).
- M.T. Westbrook and L.L. Viney. "Psychological reactions to the onset of chronic illness", *Social Science and Medicine*, xvi, (1982), 220-230.
- R. Woodfield and L.L. Viney. "A personal construct approach to bereavement", *Omega*, xi, (1982), 27-36.
- N.L. Adams. "The lopsided organization", *ANZAS Annual Conference*, Sydney, (May, 1982).
- N.L. Adams. "Evaluation of a child development centre", *Australian Psychological Society Annual Conference*, Melbourne, (August, 1982).
- D.D. Diespecker. "Transpersonal psychology", *Australian Association for the Study of Religions*, Queens College, University of Melbourne, (August, 1982).
- D.D. Diespecker. "What will we teach in the '80s?", *Australian Psychological Society Annual Conference*, Melbourne, (August, 1982).
- L.L. Viney. "Unemployment and quality of life", *ANZAAS*, Sydney, (May, 1982).
- L.L. Viney. "The psychological and social effects of unemployment," *Conference on Unemployment in the Eighties*, Wollongong, (1982).
- L.L. Viney and Y.B. Benjamin. "Use of a model of reaction to illness-related stress to develop a hospital-based counselling programme", *Australian Psychological Society Annual Conference*, Melbourne, (August, 1982).
- L.L. Viney and Y.B. Benjamin. "Evaluating a hospital-based counselling programme", *Cumberland Conference on Behavioural Medicine*, Sydney, (1982).
- M.T. Westbrook and L.L. Viney. "Sex and age differences in reaction to illness", *Cumberland Conference on Behavioural Medicine*, Sydney, (1982).

Reports

- N.L. Adams. "Staff problems and training needs in Australian Gas Light Company" Report through *Fortune Education Systems*.
- N.L. Adams. "Management communication needs", Report for *Small Business Newsletter*.
- N.L. Adams. "Industrial disputes in Port Kembla: Statistics and opinions from Union and Management", Report for *Illawarra Regional Information Service*.
- N.L. Adams. "2WL listener preferences", Survey report commissioned through *Illawarra Regional Information Service*.
- N.L. Adams. "Evaluation of a drink driver promotion", *Friends of the University*.
- N.L. Adams. "Report on staff development workshop", *Wollongong Council*.
- N.L. Adams. Report on observation of C.V.G. consultancy group.
- J. Geraghty and D.D. Diespecker. "At Brindavan". *The Australian Journal of Transpersonal Psychology*, iii, (1982), 67-70.
- J. Geraghty and D.D. Diespecker. "East and West - the seventh annual conference at Rohnay", *The Australian Journal of Transpersonal Psychology*, ii(2), (1982), 161-163.

J.M. Morris. "Selection procedures for applicants to graduate schools of business administration", Report for *Royal Melbourne Institute of Technology*.

SOCIOLOGY

Research Interests and Major Topics of Investigation

Ethnicity class and education.
 Effects of the present crisis in the steel industry, and of the coal production and transportation industries
 Causes of unemployment in Australia.
 The relationship between technology and underdevelopment.
 Role of women in the armed forces.
 Goals of scientific research.
 Environment networking process.

Monographs

- M. Donaldson. "Irian Jaya: Reluctant Colony", in R. Crocombe and N. Ali (eds.), *Politics in Melanesia*, University of the South Pacific, (1982).
 A. Rahman and S. Hill. *Castalia II: Science, Technology and Development in Asia and the Pacific*, UNESCO, (1982).

Refereed Publications

- M. Donaldson. "The State, the Steel Industry and RHP", *Australian and New Zealand Journal of Sociology*, 18,3, (1982), 339-363.
 M. Donaldson. "Feminist Perspectives - An Interview with Jean Bedford", *Australian Left Review*, 83, (1982), 34-38.
 M. Cole and M. Donaldson. "Wollongong in Crisis", *Chain Reaction*, 28,(1982), 15-28.
 K. Salleh. "On the dialectics of signifying practice", *Thesis Eleven*, No. 5.
 K. Salleh. "Nature in trouble - a reply to Robert Van Krieken", *Australian and New Zealand Journal of Sociology*, Vol. 18.

Conference Papers

- M. Donaldson and T. Donaldson. "Unemployment and the crisis in the Steel Industry", *Conference on Unemployment in the 1980's*, University of Wollongong, (July, 1982).
 M. Donaldson. "Practising Sociology: Practising Marxism", *Sociological Association of Australia and New Zealand*, Sydney University, (August, 1982).
 T. Jagtenberg. "What are the goals of scientific research? An examination of issues associated with the institutionalisation of research and legitimisation in the physical sciences", *SAANZ Conference*, (August, 1982).
 K. Salleh. "The Politics of Difference" for the Theory Symposium, *Australasian Political Studies Association Annual Conference*, University of Western Australia, (August, 1982).
 K. Salleh. "Specularity and the Sociology of Knowledge" for the *School of Sociology Visiting Seminar Series*, University of NSW, (September, 1982).
 K. Salleh. "The feminist ecological consciousness", *Conference on Co-operative Communities*, called by the N.S.W. Minister for Co-operative Societies and his Advisory Council, Sydney, (September, 1982).

Reports

- M. Donaldson and T. Donaldson. "Job Destruction in the Port Kembla Steelworks", for the Port Kembla branch of the Federated Iron-workers Association, *Wollongong Workers' Research Centre*, Report Number 24, (May, 1952).
- M. Donaldson and A. Olbrich. "Unemployment and the Modernisation of the Port Kembla Steelworks", Submission to the Industries Assistance Commission on Iron and Steel, *Wollongong Workers' Research Centre*, Report Number 15, (August, 1952).
- R. Rutnam, A. Olbrich and M. Donaldson. "Productivity in the Steel Industry", a further submission to the Industries Assistance Commission on Iron and Steel, *Wollongong Workers' Research Centre*, Report Number 17, (September, 1952).
- K. Blackie, M. Donaldson and others. "The Immediate Prospects for Port Kembla Harbour, a submission to the Premier and Deputy Premier of the NSW Government, on behalf of the Task Force on Port Kembla Harbour", (1952).

SCHOOL OF EDUCATION

Refereed Publications

- L. Gow and J. Warr. "The Porteus Maze Test in the Measurement Reflection/Impulsivity", *Perceptual and Motor Skills*, 54, (1982), 1043-1052.
- L. Gow and J. Ward. "Extension of the use of measures of cognitive style to moderately-severely retarded trainees in field setting," *Perceptual and Motor Skills*, 55, (1982), 1061-1067.
- L. Gow and J. Lyon. "Training Needs of Resource/Remedial Teachers in N.S.W. Schools". *Association of Special Education Teachers (A.S.E.T.)*, 15, 36-41.
- L. Gow. "Recommendations for implementing a resource/remedial program," *A.S.E.T.*, (June, 1982), 34-38.
- J. Ward and L. Gow. "Programming generalizations: a central problem area in educational psychology," *British Journal of Educational Psychology*, 2 (3 & 4), (1982), 231-248.
- G.K. Winley and K. Tognetti. "Approximate solutions for Coupled Moment Equations," *Journal of Australian Mathematics Society*, (Series B), 24, (1982), 86-97.
- L.M. Koder. "Future Study Expectations of Teachers." *South Pacific Journal of Teacher Education*, 10 (1), (1982), 44-56.
- P. Sales. "A Consideration of Australian Attitudes towards the U.S. after the First World War.", in J.R. Bell and I. Hickerton, *American Studies: New Essays from Australia and New Zealand*. Sydney, ANZAAS, (1981).
- R. Pretty. "Linguistics in the Classroom", *The Teaching of English*, 42, (May, 1982), 35-42.
- R. Pretty. "Literature in the Multicultural Classroom," *English in Australia*, 42, (May, 1982), 35-42.

Conference Papers

- K. Baxter and W. Winser. "Children's Melody Making," *National Child Development Conference*, Melbourne, (August, 1982).
- L. Gow. "Verbal self-instructional training to enhance generalisation outcomes with the mentally retarded", *Australian group for the study of Mental Deficiency*, Canberra, (September, 1982).
- L. Gow. "Integration of the Disabled," *Physical Education Masters and Mistresses Conference*, Bowral, (October, 1982).
- L. Gow. "Leisure Programs for the Disabled", *Conference of the Group for the Disabled*, (October, 1982).
- M. Harris. "The Flora of the Estuaries and Coastal Saline Lagoons of N.S.W.: Aspect of Ecology and Man's Impact", *Management of Estuaries Symposium*, *Water Research Foundation of Australia*, (May, 1982).
- M. Hatton. "The New Health Education Syllabus: Ideas for Programming", *Masters and Mistresses Conference*, Bowral, (October, 1982).
- M. Hatton. "Introducing the New Health Education Syllabus for Secondary Schools". *Liverpool Region Physical and Health Education Teachers' Conference*, (October, 1982).
- T. Penrose. "Prevention of injury in Sport through Improved Training Methods", *Injury in Sport Conference of Australian Sports Medicine Federation*, (November, 1982).

Reports and Other Publications

- R. Crawford. "Paint your Playground," *The Primary Journal*, (1), 22-45, (1982).
- R. Crawford. "Outdoor Mathematics", Queensland Maths Teacher: Teaching Mathematics.
- G. Gedge. "The Role of the Coach", Paper prepared for the N.S.W. Department of Leisure, Sport and Tourism - Australian Level II Coaches Accreditation Scheme, (April, 1982).
- G. Gedge. "Improving Performance of the Young Athlete", Paper prepared for the N.S.W. Department of Leisure, Sport and Tourism - Australian Level I Coaches Accreditation Scheme, (November, 1982).
- J. Scarlett and W. Winser. "Teaching Values Through Social Studies Education", *Wachagga*, 2, (1982), (in print).
- G. Wilmore. "Developing Your Sport", Paper prepared for the National Accreditation Sports Administrators Course, Level I, (November, 1982).
- G.K. Winley and K. Tognetti. "The Integral Equation of Population Dynamics", Department of Mathematics, University of Wollongong, Preprint No. 31/81, 1981. Also presented at the 1982 Australian Applied Mathematics Conference as a poster presentation, Bundanoon, N.S.W.
- W. Winser. "Learning without Classes: Distance Education", *Unicorn*, 8(2), (1982), 152-157.
- E. Booth. Report on the Social Science Panel of 1982 National Curriculum Workshop in Solomon Islands.
- R. Colvin and J. Scarlett. "Practice Teaching in Malaysia, 1982", Report to Board of Studies, School of Education, (1982).
- L. M. Koder and W. Smith. "Future Demand for Post-basic Studies in Nursing", *Illawarra Regional Council for Nurse Education*, (October, 1982).
- L.M. Koder. "Future Studies in Education", Board of Studies, School of Education, September, (1982).
- L.M. Koder, D. Anderson, D. Hogan, D. Stamp and G. Winley. "Comments on the McGowan Report", Submission to Parliamentary Select Committee, (1982).
- P. Rees, et al. "Dance in Education", Support Booklet 3, Directorate of Studies, (1982).
- J. Scarlett. Review of 'Economic Thinking in Education' by R. Harrold, *Secondary Journal*, 4-12, 2, (1982), (in print).
- S. Rice. Reports and evaluation of Health Education Syllabus and Dance Kinder-12 Project for the N.S.W. Education Department, (1982).
- A. Smith. "Aboriginal Education and Study Policy. Recommendations for Universities and C.A.F.S.", Report to the Board of Studies, School of Education, (September, 1982).
- W. Winser. "Education in Rural Areas", Invited Submission to Education Commission, (August, 1982).
- W. Winser and T. Booth. "Practice Teaching in Fiji", Report to the Board of Studies, School of Education, (1982).

Research Interests and Major Topics of Investigation

- Analysis of retelling behaviour of 240 Australian children of differing reading abilities after oral and silent reading.
- A psycholinguistic model of the reading process.
- The processing of technological prose.
- Analysis of the spelling behaviour of K,1,2 grade children involved in a writing "process" programme.
- A study of the literacy development of children from a multiplicity of ethnic backgrounds.
- High School writing project.
- South Coast region evaluation of reading study.

Research Interests and Major Topics of Investigation

Ethnicity and class and its relation to education and social policy,
Workers' Compensation.

Monographs.

- M. Morrissey. "Technological Change and Occupational Health" in S. Hill and R. Johnston (eds.) *Future Tense? Technology in Australia*, University of Queensland Press, (1983).

Conference Papers

- M. Morrissey. "The Politics of Migrant Social Welfare", *Australian Political Science Association Conference*, Perth, (August, 1982).

ACADEMIC SERVICES

THE MICHAEL BIRT LIBRARY

From the commencement of first session, the library of the Institute of Education was located in the University Library building. Although the physical relocation of the Institute collection was effected with relative ease, the disadvantages of this decision will be apparent for some years.

The Institute monograph collection of about 20,000 volumes had to be shelved separately from the University collection. The collections cannot be integrated until the conversion of the Institute cataloguing records to machine readable format. The conversion will take three to four years unless special funding is allocated. The serials collections of the two libraries were integrated during the year.

Amalgamation highlighted the inadequacies of the Library building. If current acquisition and storage policies continue, the building will reach maximum storage in 1985. The increased number of library users has aggravated the noise problem caused by the overcrowding of study areas.

Restricted funding affected the level of library services. The purchasing power of the book-vote necessitated the cancellation of 181 serial subscriptions. Staffing was also restricted. The staffing establishment of the combined Library was less than that of its former constituents.

The administrative arrangement of the Library was revised in May. An executive officer was made responsible for the general administration of the Library. The University Librarian undertook policy advisory and review activities until the end of the year.

The secondment of the Archivist to administrative duties left the Archives section understaffed. Use of the collection continued and increased by 12%. No substantial additions were made to the collection.

During the year, 12,614 volumes were added to the Library monograph collection. The total Library collection is now in excess of 240,000 volumes. Use of the collection increased by 31.88%. Expectedly, the heaviest area of use was undergraduate borrowing. Loans to undergraduates rose from 83,434 in 1981 to 109,751 in 1982.

COMPUTER CENTRE

During 1982, 210,942 runs were processed giving a dollar value of \$2,999,000. In terms of the number of runs, this was a considerable increase over the previous years total of 178,000. The dollar value was lower than the \$3,600,000 in 1981 because of reduced notional dollar charges for memory usage.

With increasing numbers of courses being structured so as to utilize the benefits of interactive processing, daytime demand usage further increased in 1982; 71% of all runs processed as compared with 68% in 1981. Batch runs correspondingly decreased during the peak daytime period, but demand and batch usage during the night remained relatively stable.

Huntley Colliery and the Government Employees Medical and Hospital Benefits Club remain as external users with direct on-line access to the Univac mainframe. Wollongong City Council, having acquired their own computer system late in 1982 ceased to be the major external user. Via a Perkin-Elmer computer link at the Wollongong City Council utilizing WOLFE (Wollongong Front-End) software, Shellharbour Municipal Council continued to process relevant applications such as Rates, Payroll and Works Costing. Other external users, Wollongong and Shellharbour libraries and Telecom availed themselves of the batch facilities provided, or used either low speed dial-up lines or were connected by way of Perkin-Elmer front end processors using WOLFE software.

Towards the end of 1982 considerable development of a document processing system entailed not only enhancement to the existing WOLFE software, but technical improvement to low-cost Beehive terminals. This development then enabled secretaries in particular to create text files on the front-end machines using SSED (a new full screen editor) these files processed on the mainframe using the TEX package and receive, via the front end WOLFE software, output on the OUME high quality printer.

Of major importance in the direction of Computer Centre activities, is the stability of the Univac Operating System. With few aberrations from the norm, software stability was generally very satisfactory throughout 1982. This of course meant development in other areas not only progressed unimpeded, but was allowed to accelerate. Indeed, general throughput reaped the benefits of stable software.

Chiefly, hardware upgrades were confined to replacement of two disc subsystems (8440 and 8450) with one dual controlled 8470 subsystem increasing the overall mass storage capacity from 1200 megabytes to 1600 megabytes, and acquisition of a second tape subsystem further reducing the time taken to transfer files from disc to tape. Major enhancements were made to Beehive terminals in the network by Computer Centre technical officers in order to facilitate graphics capability and full screen editing, the latter as the linchpin in the burgeoning document processing applications field.

EDUCATION RESOURCES CENTRE

The amalgamation between the University of Wollongong and the Wollongong Institute of Education had direct implications for the work of the Centre during 1982. Considerable time was spent by all staff in preparing and implementing the rationalization of the visual services of the two sectors. The amalgamated Centre lost one member of staff during the rationalization process which made the task considerably more difficult and reduced the quantity of support available. Nevertheless, by the end of the year, equipment holdings had been combined and procedures established for the provision of services to the entire campus. Some outstanding problems related to the amalgamation will not be solved until it is possible to appoint more staff to the Centre.

The Centre's teaching development programme suffered somewhat because of the work associated with the amalgamation. Calls on the staff for advice on teaching methods and for professional evaluations of teaching grew steadily and were met in every instance but the planned programme of seminar/workshops had to be curtailed. In the event five video workshops were offered and there was an excellent response from staff.

During the year, a Working Party on the future of the centre met on a number of occasions. Its Report was submitted in early 1983.

STUDENT ACTIVITIES

THE STUDENTS' REPRESENTATIVE COUNCIL

1982 was a very busy year with a great deal of work being put into a "successful" amalgamation. Other fields of intensive work revolved around educational rights of students and strong student representation on all levels of University structures - numerous Committees, Senate, Council, etc.

This S.R.C. was a strong pro-A.U.S. group. Membership of A.U.S. was a major advantage in trying to inform and link a small, isolated campus to national educational issues.

The S.R.C. of 1982 also tried to foster and develop community links with organisations in need of support in areas of general student interest.

THE UNION

All students and staff of the University are members of the Union which exists to provide a social centre for the campus and to promote a range of activities to complement the mainstream academic work of the University. The affairs of the Union are controlled by a Board of Management and in day to day matters, by the Secretary-Manager.

1982 was another successful year for the Union, with continued growth in the usage of all the Union's services to the point where extensions to the Union Building are having to be considered as a matter of urgency in view of the pressure upon existing facilities. The Union's programme of activities was also well supported and events staged during the year included: lunchtime and evening concerts, featuring outstanding classical music and jazz performers; a varied range of arts and crafts exhibitions; a series of recreational classes in subjects such as yoga, jazz fitness, thought dynamics, photography, typing, guitar, speed reading and study techniques; a number of public debates on current affairs, as well as regular film shows and social entertainments. Union clubs and societies provided a further range of activities and two new societies - Literature Society and the Catholic Society - affiliated during the year.

The year was also marked by further increase in use of the Union's facilities and services by the local community which served to bring many thousands of visitors to the campus and thus strengthen links between 'Town' and 'Gown'.

The Childcare Centre operated by the Parent's Club ("Kids Uni") continued to thrive and provide a much needed service on campus, with high standards of childcare and pre-school education. However, the demand for places was such that for most of the year the Centre operated with well in excess of the desirable number of children. In the absence of progress towards the building of planned Stage II of the Childcare Centre the Management Committee has had no alternative but to lower the limit of the number of children that can be accommodated for 1983 in order that safe and satisfactory standards can be achieved.

The other significant development to affect the Union in 1982 was the federation of the University and Wollongong Institute of Education. Throughout the year meetings took place involving representatives of the Institute Students' Association and the University Union, Sports Association and Students' Representative Council, and after some initial reservations on all sides rapid progress was made on agreeing on a structure which from 1st January 1983 will bring all students of the federated University into membership of a single set of organisations, but which will preserve a degree of limited autonomy for the students of the Institute sector.

SPORTS ASSOCIATION

The Sports Association exists to provide a range of sporting and recreational activities for the University and all students and staff are full members of the Association.

In 1982 there were twenty one constituent clubs of the Sports Association in which members can participate. These clubs cover most sporting activities as shown in the list below:-

Athletics	Judo	Squash
Australian Rules Football	Motor Cycle	Surf-Riders
Badminton	Netball	Table tennis
Basketball	Rugby Union	Tae Kwon Do
Cricket	Sailing	Tennis
Hockey (Men's)	Skiing	Touch Football
Hockey (Women's)	Soccer	Volleyball

The Sports Association also promotes a wide range of intra-mural and social sports programmes and during 1982 - the second year of operation of the programmes - there was a major growth in participation rates, to the point where over 10% of the campus population have been involved in this part of the Sports Association's activities alone.

1982 has also seen continued investment by the Sports Association in the development of sporting facilities on campus. The most significant project undertaken during the year was the work on the completion of the No. 1 Oval, to create a turf cricket wicket and a second hockey field.

COUNSELLING CENTRE

During 1982, 312 people used the Counselling Service for personal concerns. During February, 240 people participated in a Preparation for University Programme for first year students. A formal evaluation of this programme indicates that it was effective in achieving its aims of establishing social support networks amongst students and preventing emotional stress within students, during their transition to university. During Session One and Two, group programmes were offered on managing stress, effective study and assertiveness training.

During second session, the Counselling Centre took over the administration of the Careers Service. Campus Interview programmes were organised and several seminars were offered on making job applications and preparing for interviews. The Counselling Centre continued to oversee the student Accommodation Service and Part-time/Casual Employment Service. Both were extensively patronised by students. The University's Medical Service also operates from the Counselling Centre and is serviced by interested local general practitioners. A total of 218 persons consulted the Medical Service's personnel during 1982 while 69 availed themselves of the Family Planning Clinic.

INTERNATIONAL HOUSE

Demand for accommodation was even higher than in previous years. At the commencement of the academic year, over three hundred applications had been received and the House had some 19 students on the waiting list. Due to resident withdrawals from the University after commencement of the academic year and the time required to fill the vacant rooms, average occupancy rate was approximately 98% in Session 1 (95% in Session 2).

Four formal dinners were organised in conjunction with Residents' Association. Guests included the Vice Chancellor, members of the Board of Management and their spouses.

The House was host for one day of a three day meeting of local representatives of the Association of Heads of Residential Colleges and Halls on 7th August, 1982. This visit was very successful. The Vice Chancellor gave an informative address on the amalgamation of a University and a C.A.E.

UNIVERSITY OF WOLLONGONG

	ARTS			COMMERCE			ENGINEERING			MATHEMATICS			METALLURGY			SCIENCE			TOTAL		
	F	P	T	F	P	T	F	P	T	F	P	T	F	P	T	F	P	T	F	P	T
HIGHER DEGREE																					
MASTERS	7	29	36	2	1	3	3	10	13	2	0	2	1	2	4	6	6	12	21	54	59
- Research	17	28	45	2	5	7	18	31	49	1	3	4	3	1	4	6	4	10	47	72	119
- Coursework																					
SUB-TOTAL	24	57	81	4	6	10	21	41	62	3	3	6	4	3	7	12	10	22	68	120	188
Ph.D.																					
TOTAL HIGHER DEGREE	29	18	47	0	5	5	7	12	19	6	6	14	0	3	3	14	10	24	56	56	112
OTHER THAN HIGHER DEGREE	53	75	128	4	11	15	26	53	81	9	11	20	4	6	10	26	20	46	124	176	300
POSTGRADUATE																					
- Masters - 26 credit points	18	9	27	0	1	1	8	0	8	0	1	1	1	1	2	5	6	11	32	16	50
- Master of Studies	1	10	11	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	2	13	15
- Master of Management	0	0	0	1	26	27	0	0	0	0	0	0	0	0	0	0	0	0	1	26	27
- Postgraduate Bachelor	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
- Diploma	69	34	103	6	23	29	1	0	1	0	18	18	1	2	3	1	1	2	78	73	155
SUB-TOTAL POSTGRADUATE	88	56	144	8	53	61	9	0	9	0	19	19	2	3	5	6	8	12	113	137	250
UNDERGRADUATE																					
- Bachelor - New	144	156	300	115	86	201	169	68	237	45	47	92	16	19	35	48	38	76	529	418	943
- Honours	28	14	42	1	3	4	0	0	0	2	2	4	0	0	0	4	2	6	35	21	56
- Pass	254	332	586	131	171	302	237	132	369	66	80	146	32	62	94	67	62	129	767	679	1406
- Re-enrolling	4	11	15	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	4	11	17
- Honours																					
SUB-TOTAL UNDERGRADUATE	430	513	943	247	261	508	386	200	586	113	129	242	48	81	129	111	103	214	1335	1407	2862
NON-DEGREE																					
- Miscellaneous																			2	57	99
TOTAL OTHER THAN HIGHER DEGREE																			1450	1521	2971
GRAND TOTAL ENROLLMENTS																			1574	1697	3271
STUDENT LOAD																					
- Other than Higher Degree																					
- Higher Degree																					
- TOTAL																			2080	412	2492

WOLLONGONG INSTITUTE OF EDUCATION

Course	Full-Time	Part-Time	External	Total
GRADUATE DIPLOMA				
Environmental Education	-	15	-	15
Health Education	-	-	28	28
Language	-	12	32	44
Mathematics	-	-	16	16
Primary	-	1	-	1
School Administration	-	13	-	13
Sub-Total	-	41	76	117
BACHELOR OF EDUCATION				
Primary (Conversion)	-	-	189	189
Physical & Health Education	182	20	-	202
Physical & Health Education Conversion	-	-	58	58
Sub-Total	182	20	247	449
DIPLOMA IN TEACHING				
English/History	12	3	-	15
Mathematics	9	11	-	20
Physical Education	-	3	-	3
Primary	90	11	-	101
Primary (Conversion)	-	-	144	144
Primary (Component of BEd)	200	3	-	203
Sub-Total	311	31	144	486
ASSOCIATE DIPLOMA				
Arts - Performing	27	21	-	48
Arts - Visual	17	22	-	39
Sub-Total	44	43	-	87
TOTAL	517	135	467	1119

DEGREES, DIPLOMAS CONFERRED

UNIVERSITY OF WOLLONGONG -

The following candidates were admitted to degrees of the University by the Chancellor at Graduation Ceremonies held on Thursday, 6th May and Friday, 7th May, 1982.

BACHELOR OF ARTS

Sylvia Acevedo	Sabatino Gianni
Viken Achjian	Dianne Melanie Gibson
Valerie Esmé Dorothy Andrews	Andrew John Glover
Juliette Louise Anthony	Pamela Therese Gray
Kim Josephine Aubin	Ian Bruce Greig
Nyrelle Margaret Austin	Helen Grimes
Judith Beryl Ball	John Douglas Guppy
Ross Barnes	James Russell Hagan
Judith Helen Beggell	Melda Joy Hannam
Angelina Grazia Belsito	Deirdre Heatherjoy Harvey
Christine Jane Bessell-Browne	Narelle Lorraine Haworth
Margherita Rosa Bianco	John Francis Hayes
Gabrielle Angela Blattman	Shirley Irene Heuston
Alife Boock	John Herbert Hobson
Sally Joan Bramley	Patricia Joy Hocking
Maria Rosaria Briglia	Joan Margaret Hodge
Stuart Marshall Brooking	Leonie Christine Houghton
Susan Joanne Brown	Felizardo Antiporda Intervalo
Thomas William Byrne	John Joseph Johnston
Pierino Caputi	Julie Ann Johnston
Mary Carevic	Lynnette Anne Jones
Deborah Joan Carrick	Alma Marjorie Jordan
Lydia Irene Josephine Castiglione	Margaret Lane
Joan Dorothy Cathcart	Gregory John Lanyon
Nicholas Chourtos	Jennifer Mavis Le Page
Anne Margaret Cobbin	Paul Lelli
Robyn Coleman	Floriana Lenzo
Janice Patricia Condell	Angela Lester
Kathleen Isabel Condell	Audrey Lilian Lowrie
Matthew Lee Coonan	Audrey Ann Lucas
Jacqueline Cope	Marie Therese Lyall
Vick George John Cosic	Janet Margaret Lysaght
Harry Couchman	Hugh Edward Macdonald
Vivienne Jean Daley	Paul Arthur Macdonald
Wayne Gregory Davies	Patricia Catherine Marsh
Peter Joseph Dawson	Margaret Joan Mathieu
Susan De Boni	Jennifer Maree Matters
John Ross Dewhurst	Deana Anita Mazuran
Julie Marie Dewhurst	Patricia McGill
Frank Di Giorgio	Robin Melvin McKinlay
Roberta-Ann Dickie	Brian James McKinnon
Julia Mai Dorrington	Linda Jane Meek
John Patrick Doyle	Belinda Martha Miller
Lindsay James Duncan	Bernard Peter Murphy
Christine Louisa Edmonds	Catherine Elizabeth Murphy
Martin Gerard Egan	Michelle New
Helen Mary Eppel	Katherine Nobbs
Gregory John Erwin	Anthony John Nutt
Susan Fares	Kim Kathleen O'Grady
Mark Leonard Felton	Peter Francis O'Hara
John de Fraine Felvus	Terry William O'Toole
Jane Elizabeth Ferguson	Janette Oliver
Paul Leslie Finch	Merike Gail Oopik
Lynda Ann Frankcombe	Mara Panok
Kathleen Jill Gallagher	Carol Ann Pearson
Walter Gheller	Rhonda Ann Pratley

BACHELOR OF ARTS (continued)

Pamela Margaret Rampe	Karl Edwin Skow
Aminath Rasheed	Gillian Megan Smith
Beverley Ratcliffe	Patricia Anne Spry
Petra Lynn Rees	June Stamp
Bridget Roberts	Rosemary Joan Stone
David John Robson	Jeanette Dorothy Stutchbury
Georgia Rodgers	Grace Tague
Maureen Margaret Ronczka	Makafalani Tatafu
Barbara Ada Roser	Daniel Edmund Taylor
Scott John Roulstone	Mark Tirris (Posthumous)
John Ruscica	Radmila Tootell
Lisa Denise Sakun	Olga Treay
Isabel Sanchez	Maria Tsoukalas
Fred Marcel Seidel	Timothy William Vandenberg
Olga Seitaridis	Gary Vaughan
Jan Anders Sellin	Natalie Clare Verdon
Shadia Habib Shalala	Christine Marie Wales
Jean Sharkie	Allan Kenneth Went
Kenneth Robert Shaw	Gerhard Franz Wenzel
Wendy Ann Shipard	John Wieruszewski
Julie Maureen Short	Jill Lorraine Williamson
Christine Frances Simpson	Janelle Frances Wilson
Megan Sixsmith	Jean Marguerite Wilson

BACHELOR ARTS - HONOURS

Mounir M. Bahsoun, BA - (Honours Class II, Division 2)
Ronald John Carne, BA - (Honours Class I)
Glenda Charlton, BA - (Honours Class I)
Helen Anne Craig, BA - (Honours Class II, Division 1)
Narelle Crux, BA - (Honours Class II Division 1)
Christine Mary Dixon, BA - (Honours Class I)
Kim Draisma, BA - (Honours Class II, Division 1)
Lois Gail Dunkerley (Honours Class II, Division 1)
Lynn Margaret Fahey, BA - (Honours Class I)
Audrey May Heycox (Honours Class II, Division 1)
Brian Thomas Horan, BA - (Honours Class II, Division 2)
Anne Veronica Lear, BA DipEd N.S.W. - (Honours Class II, Division 1)
Kevin Gibson Mills, BA - (Honours Class I)
Daniel Pitman Moody, BA - (Honours Class I)
Mark David Nicholson (Honours Class II, Division 1)
Maret Oser, BA - (Honours Class II, Division 1)
Stephen Pomfrett, BA - (Honours Class III)
Carol Anne Preston (Honours Class I)
(The Australian Psychological Society Prize in Psychology)
Emilio Robles (Honours Class II, Division 1)
James David Sheedy (Honours Class II, Division II)
Phyllis Joan Tibbs, BA - (Honours Class II, Division 1)
Kerry Maree Whitn, BA - (Honours Class 2, Division 1)

BACHELOR OF COMMERCE

William Neil Bath
 Alan Robert Biggs
 Scott Andrew Brodie (with Merit)
 Robert Adrian Brown
 Darrel John Causbrook
 Malcolm Gregory Cook (with Merit)
 Terry Glen De Coster
 Enzo Peter Frino
 Kris Russell Gallagher
 Matthew John Gamble
 Anthony Mark Gear
 John Leslie Gerrard (with Merit)
 Torsten Gerwien
 Noel Anthony Gray
 Ian Norman Grose
 John Frederick Henry
 Robert Bruce Higgs
 Ian William Hunt
 David Ellis Jones
 Jennifer Therese Jones (with Merit)
 Amelia Kollias
 Ian Robert Eden Lawrence
 Keith Michael Lopuszynski
 Brett Macquaire
 Ornella Manera
 Jon Joseph Marks
 Carl Lachlan Matchett
 John Laurence May (with Merit)
 Babara Nees

Patricia Lillian Nelson
 Peter Harry Nierle
 Tom Nikolovski
 John Ntatsopoulos
 Denise Marie O'Neill
 Geoffrey David Parker
 Thomas Gordon Parkinson (with Merit)
 (Corporate Affairs Commission Prize)
 Ian David Pollard (with Merit)
 Goran Predic
 Richard Ernest Robinson (with Merit)
 Ian Rowntree
 William James Nelson Saunders
 Dewendra Kuar Singh
 Neil William Smith
 Philip Francis Snowden, MSc Cant. - (with Merit)
 Peggy Mary Stambul
 Dusko Stefanic
 Bradley John Stone
 Daniel Studencki
 Jennifer Merran Thurgate (with Merit)
 (Australian Society of Accountants Annual Prize)
 Malcolm James Tomlinson (with Merit)
 Carey James Waterworth
 Peter Michael Wheeler
 Graeme Selwyn Williams

BACHELOR OF COMMERCE - HONOURS

Pauline Alison Doyle, BCom - (Honours Class II, Division 2)
 Stuart John Sargent, BCom - (Honours Class II, Division 1)

BACHELOR OF ENGINEERING**Civil Engineering**

Nigel Parker Ballantyne
 Branimir Anthony Dragovic
 Cliff William Harris

Gregory Mark Hughes
 John O'Connell
 Hindarto Setio

Electrical Engineering

Paul Francis Cooney
 Peter Geoffrey Henderson
 Terence Charles Larkin
 Christopher Paul Madsen

Rosa Mercedes Munive de Jenkins
 Glenne Ernest Parrish
 Vaughan Alexander Williamson
 Kevin John Woods

Mechanical Engineering

Graham Wesley Badman
 Warren George Davis
 Benno Adolf Gawehn
 Patrick Robert Giles
 John Albert Hackfath
 Phillip Michael Healey

Russell Graham Jennings
 Roderick John Pruks
 Peter Thomas Wall
 Bruce Lyndon Ward
 Geoffrey Brian Watts

BACHELOR OF ENGINEERING - HONOURS**Civil Engineering**

Cornelius Franciscus de Groot (Honours Class 11, Division 2)
 John Laurence Gibson (Honours Class 11, Division 2)
 Anthony John Edward Murphy (Honours Class 11, Division 1)
 Douglas Nils Nicholaisen (Honours Class 111)

Electrical Engineering

Edwin Christian Bykerk (Honours Class 11, Division 1)
 Vincenzo De Santis (Honours Class 11, Division 2)
 Stephen Herbert Hamer (Honours Class 1)
 John Werner Harter (Honours Class 11, Division 1)
 (Staff Prize for the Fourth Year Electrical Engineering Thesis)
 Nabil Issa (Honours Class 11, Division 1)
 Christopher John Reid (Honours Class 11, Division 1)
 Michael Augustus Smith (Honours Class 1)
 (The Institution of Engineers, Australia, Award)

Mechanical Engineering

Stephen Heinz Bergner (Honours Class 11, Division 2)
 Robert Enzo De Lazzari (Honours Class 111)
 Graeme Hill (Honours Class 11, Division 2)
 Gerhard Horst Mann (Honours Class 11, Division 1)
 Claudio Vitalino Morson (Honours Class 11, Division 1)
 Greg Bruce Simpson (Honours Class 111)
 Mile Terziovski (Honours Class 11, Division 1)
 Paul Anthony Tolhurst (Honours Class 111)
 Trevor Barry Wilkinson (Honours Class 11, Division 2)

Mining Engineering

Stephen Glenn David (Honours Class 111)
 (Western Mining Corporation Prize for the Mining Engineering Course)
 Carmelo San Gil (Honours Class 111)
 (Western Mining Corporation Prize for the Mining Engineering Thesis)

BACHELOR OF MATHEMATICS

Peter Donald Asquith	Elizabeth Helen Kalokerinos
Kerrie Irene Bloomfield	Vasio Karamitsios
Sharon Lynne Chie	David Ross McClymont
(Statistical Society of Australia	Angelo Milan
N.S.W. Branch Prize)	Marisa Pagnan
Anne-Maree Creenaune	Jennifer Pauli, BEcDipEd N.E.
Anthony-Vito Cuoco	Anthony Michael Quinn
Bridget Mary Davis	Rita Mary Reid
Michael Leonard Entwistle	Beatriz Rojas
Belinda Ann Everitt	David Sherley
Donald Kennedy Findley	Ralph Edward Szulerowski
Sergio Michael Glason	Helen Kathleen Varga
Judith Ann Hammond	John Wagner
Karl Harm	Ian Ronald Watkins
Robert Victor Hennessy	Alexander Zelinsky
Paul Hysiatidis	

BACHELOR OF MATHEMATICS - HONOURS

Kerrienne Brennan, BMath - (Honours Class 1)
 Peter David McIlquham (Honours Class 1 and University Merit)
 (The Austin Keane Memorial Prize)
 Milan Pahor, BMath - (Honours Class 1)
 Michael Anthony Sparks (Honours Class 1)
 Tony Peter Van Ravenstein, BMath - (Honours Class 11, Division 1)

BACHELOR OF METALLURGY

Paul Dawson
 James William Harpley
 Barry James Hodgson
 (Australian Institute of Metals (Port Kembla Branch) Metallurgy Prize)
 Peter John Jakins
 Neil Anthony Kaye

BACHELOR OF SCIENCE

Narelle Anne Angel	Jennifer Jean Moon
Elaine Deborah Bennett	Nigel Colin Parker
Andrew Robert Brinsmead	Philip Irvine Parkin
Gregory Patrick Brown	Peter Rontziokos
(The A.J. & I. Waters Prize in Geology)	Narelle Sales
Philip Brown	Michael Sharp
Susan Mary Carthew	Darrell Gregory Peter Shephard, BA
James Anthony Cummins	Macq.
Christine Eunice Drabble	Peter Charles Shephard
Russell John Fletcher	Milton James Sherring
Penelope Kay Grahame	Coral Rose Sowden
Geoffrey John Imisides	Carolyn Dorothy Tate
Trevor Douglas Jones	Beatrice Anne Taylor
Arthur Edmund Jux	Jonathan Dean Thompson
Wolfgang Korth	Leigh Richard Tristram
Roman Kuzyk	Glenn Douglas Turner
Dinaaz Lentin	Graham Stanley Unicomb
Alan Joseph Lewis	Rozalia Magdalena Varga
Yolanda Isabel Medina	Michael Neil Wakefield
David William Meredith	

BACHELOR OF SCIENCE - HONOURS

Susan Margaret Anstey, BSc - (Honours Class 11, Division 1)
 Donna Marie Ashelford, BSc - (Honours Class 1)
 Ian Stewart Barrow (Honours Class 11, Division 1)
 Peter Donald Gray, BSc - (Honours Class 1)
 (The Peter Beckmann Memorial Prize)
 Colin Geoffrey Hall (Honours Class 11, Division 1)
 Larry Alan Hick, BSc - (Honours Class 11, Division 1)
 Douglas Mark Howarth (Honours Class 1)
 Linda Lea Ingram (Honours Class 1)
 Kylie Frances Mackenzie, BSc - (Honours Class 11, Division 1)
 Robert Stephen Powrie, BSc - (Honours Class 11, Division 1)
 Julie Ann Silburn, BSc - (Honours Class 1)
 Deirdre Tober, BSc - (Honours Class 1)
 (Bert Halpern Prize in Chemistry)
 Franklin Vairnhos, BSc - (Honours Class 11, Division 1)

HIGHER DEGREES**MASTER OF STUDIES IN ACCOUNTANCY**

Graham Dean Atkinson, BCom
 Dennis Lagopodis, BCom
 Michael Li Hung Kwan, BCom W.A.
 Geoffrey Maxwell Smith, BCom

MASTER OF STUDIES IN EDUCATION

Terrence John Burns, BA Macq.	Joyce Florence McIver, BA
Mervyn Raymon Hall	Bernadette Therese O'Sullivan, BA
Anne Jean Hayward, BEd Leeds	BEcN.E.

MASTER OF ARTS - HONOURS

Paul Nicholas Delaney, BA DipEdNcle.
 James Harold Leigh, BEdStudNcle., BA DipEd.
 Ghulam Mustafa, BA MSc. Punj

Gillian Reffell, BA Syd.
 Thesis: "The Sand Extraction Industry in Wollongong, N.S.W. - Its Development and Future".

Pamela Joy Hall, BA BSc MPA N.S.W.

Hilary Anne Maitland, BA N.S.W.
 Thesis: "Subjects Perception of and Responses to Punishment: A Study of Perceived Severity of the Punishing Stimulus, Perceived Locus of Control, and Perceived Control over the Punishing Stimulus".

MASTER OF EDUCATION - HONOURS

Brian Patrick Long, BA DipEd Macq. DipPhil

MASTER OF ENGINEERING - HONOURS

Mark Peter Chellew, BSc N.S.W.
 Bruce Raymond Frier, BE N.S.W.
 Kenneth John Halstead, BE N.S.W.
 Warren Richard Parker, BSc (Eng) N.S.W.
 Peter Francis Stewart, BE Syd.
 Tony Dieter Strasser, BE N.S.W.
 Thesis: "Modulation of Polyphase Inverters".

DOCTOR OF PHILOSOPHY

Graham Richard Carr, BSc N.S.W.
 Thesis: "The Mineralogy Petrology and Geochemistry of the Zinc-Lead Silver Ores and Host Sedimentary Rocks at Lady Loretta, North-West Queensland".

Thomas Jagtenberg, BE N.S.W., MScManc.
 Thesis: "The Social Construction of Science: a Theoretical and Empirical Investigation of Aspects of the Institutionalisation of the Physical Sciences."

Glenn Mitchell, BA DipEd N.S.W.
 Thesis: "Company Community and Governmental Attitudes, and their Consequences, to Pollution at Port Kembla with Special Reference to the Electrolytic Refining and Smelting Company, 1900-1970."

Stanley Ozimic, BSc A.N.I.
 Thesis: "Petrological and Petrophysical Study of Permian Arenites for Potential Subsurface Storage of Natural Gas, Sydney Basin, New South Wales, Australia".

Alan Thomas Twomey, BSc N.S.W.
 Thesis: "Cognition, Language, and Culture: Foundations for Aboriginal Schooling".

Onn Choon Weng, MScWaik.
 Thesis: "Synthesis of Dihydroisoindole Derivatives".

UNIVERSITY OF WOLLONGONG DIPLOMATES

The Council of the University awarded Diplomas as Follows:

Diploma in Accountancy

Anderson Posing Kenga, BTechAcc
P.N.G. Tech
John Vicars Kopetko, BE
Rodney Ewan Moore, BCom

A Chew Ng, BA Nan
(Touche Ross & Co Chartered
Accountants Prize for Business
Finance)
Robert Joseph Speed, BSA BCom
Sask.

Diploma in Applied Multicultural Studies

Barbara Lynne Bailey, BA Syd., DipEd NE
Roslyn June Douglas

Mustafa Ozcan

Diploma in Computing Science

Alastair Ronald Anderson, BSc
A.N.U. DipEdMonash

George William Humphries, BSc
DipEd Adel.

Diploma in Education

Vasiliki Arvantis, BA
Margaret Joyce P. Baker, BSc
Philip John Beechen, BA A.N.U.
Michelle Ruth Brook, BA
Catherine Maureen Byrnes, BA
Colleen Joanne Carey,
BA NE., DipLib N.S.W.
Joan Elaine Churchill, BSc Wales
Bruce Peter Coghill BA
David James Cook, BSc
Mariann Patricia Cowan, BA
Jill Ethel Croft, BSc Qld.
Ann Regina Cullen, BA
Christopher Phillip Cullen, BA
John Graham Currie, BA
Enola Donda, BA
Louise Anne Fantinel, BA
Rosanna Chiarina Ganassin, BA
Neale Reuben Greenway, BCom
Garry John Griffith, BA
Nicholas Hubert Groenen, BA
Patricia Ann Hannah, BA
Carolyn June Hick, BA DipLib N.S.W.
Sylvia Huntley-Moore, BA
Judith Anne Jeffery, BA
Barbara Ann Johnson, BA Griff.
Sandra Ann Jolliffe, BCom
Victoria Jane Kater, BA

Jill Catherine Kelly, BA
Kim Annette Kerr, BA
Meli Kotamanidis, BA
Kevin James Linnett, BMath
Jennifer Joy Manson, BA A.N.U.
Christopher Charles Marshall, BA
Maria Mazzola, BA
Kate Clara McGregor, BA
Janice Elaine McLaughlan, BA
Jennie Maree McLean, BA
Darine Myrylowicz, BA
Craig Neilson, BA
Gerald O'Neill, BA
Dianne Joy Parker, BA
Petra Blundell Peady, BSc Qld.
Mark Stuart Potts, BA
Fiona Marie Raymond, BA
Maria Rosa Scolia, BA
Maria Dolores Spohr, BA
Diedre Anne Swindles, BA
Kathy Anne Tobin, BA
Concetta Elizabeth Villano, BA
Anne Maree Walsh, BA
Robin Jane Watt, BA Syd.
Phillip John Webb, BA
Martin William Whitcher, BA
Helen Margaret Whiteley, BA
Craig Anthony Williams, BSc

Diploma in Management Studies

Maurice Neil Neilsen, BSc(Tech) N.S.W.

Trevor William Phillis, BE

Diploma in Mathematics

Mark Gregory Tatam, BSc

Diploma in Metallurgy

Ross Ramsay Sutherland, BSc

Diploma in Philosophy

Blake Walter Larkin, LLB A.N.U.
Maureen Kaye Postma, BA

Robert George Preston, BA
John Henry Salmon, MB BS Syd.

Diploma in Sociology

Leigh Baker, BA LLB N.S.W.

Amanda Lee Martin, BA

DEGREES CONFERRED BY COUNCIL**DOCTOR OF PHILOSOPHY****CHEMISTRY**

Daniel Gerard Burke, BSc N.S.W.

Thesis: "The application of Gas Chromatography and Mass Spectrometry to the study of human diseases: the identification and quantitation of the urinary volatiles associated with a number of genetic defects".

GEOLOGY

Barbara Lynne Jakeman, BSc N.S.W.

Thesis: "Quantitative Analysis of Sedimentation and Structure Relating to the Permo-Triassic Succession of the Southern Sydney Basin".

Master of Engineering**CIVIL ENGINEERING**

Vidyuds Vidins, BSc(Eng) N.S.W.

Thesis: "The Management of Large-Scale Heavy Industrial Projects".

Bachelor of Arts

Laurence Edward Brady
Michael Joseph Clarke
Sophia Apollonia Maria Everett
Susan Dawn Gauci
Peter Gregory O'Connor
Maurice Michael O'Sullivan
Paul Van Ryan

Bachelor of Arts - Honours

Cheryl Jean Knell, BA - (Honours Class 11, Division 1)

Bachelor of Commerce

Jane Alexa Baxter (with Merit)
Ian Allan Brown

Bachelor of Engineering - Honours

Ross Ramsden, BE - (Honours Class 11, Division 1)

Bachelor of Metallurgy

Philip Andrew Atkinson

Bachelor of Science - Honours

Don Chris Malegan, BSc - (Honours Class 11, Division 1)

WOLLONGONG INSTITUTE OF EDUCATION

The following candidates were admitted to diplomas and degrees of the Wollongong Institute of Education by the Chairman of Council at a Graduation Ceremony held on Friday, 23rd April, 1983.

DIPLOMA IN TEACHING

Awarded with Distinction

Christine Ann Cohen
Rina D'Acunto
Helen Gwen Gostellow
Gai Cheryl Hennessy
Carolyn Hope
Kristine Fay Jones
Patricia Florence Josh
Angela Tritsiniotis
David Nelson Weymark
Raymond John Willis

♦♦♦♦

Donita Alvares
Jennifer Lesley Arnold
Sharon Rose Arthur
Bruce Stephen Aylmer
Lyndall Anne Bailey
Bradly John Gerard Baker
Stephen John Bennett
Mary-Jane Bignell
Mark Andrew John Blackshaw
Marian Bohm
Frances Clare Boon
Jennifer Maree Brasington
Gary Stephen Bridge
Craig Allan Brierley
Mark Philip Brimfield
Jayne Elizabeth Brunker
Peter Robert Burns
Suzanne Margaret Burt
Leonie Byrne
Carol Anne Chapman
Jane Alexandra Chessell
Maria Cicero
Leone Gai Clarke
Cheryl Jean Clendinning
Lilly Corbeska
Geoffrey Stephen Corbett
Elaine Barbara Cotterill
Maureen Patricia Creenaune
Broderick Nathan Crighton
Kelly Cumming
Derek John Davies
Peter John Davies
Deborah Lyn Delaney
Vitale Lee DiMilia
Jennifer Dileva
Lynette Elizabeth Duffy
Judith Anne Durnford
Lesley Espinosa
Janet Maree Ewart
Kerryn Lee Fairfax
John Gerard Fiedeldy
Lorraine Margaret Francis
Rhonda Anne Fredericks
Roslyn Margaret Gaynor
Frances Anne Geraghty

Stella Glen
Louise Ann Gough
Stephen William Gray
Gail Margaret Ann Gregory
Michelle Griffith
Maria Helen Groch
Antony Gerard Gurtner
Karen Ann Harris
Bronwyn Harrison
Mary Rose Elizabeth Harrison
Rosemary Anne Hayes
Carol Anne Henderson
Kim Irene May Hetherington
Beverley Joy Hine
Susan Christine Hobbs
Peter Hodgson
Lynda Gail Humphreys
Beth Louise Jackson
Allyson Michelle James
Kay Margaret Jepson
Jean Johnson
Wendy Anne Johnston
Maureen Anne Jones
Richard Mark Jones
Christine Kearton
Helen Konig
Donna Elizabeth Kuit
Debra Joy Lacey
Alan Leslie Leake
Tanya Maree Lean
Virginia Louise Leary
Sandra Margaret Lee
Sharon Mary Leonard
Patricia Anne Ling
Kim Genelle Lock
Julie Anne Markwort
Manolita Martinez
Dimitra Mastoris
Hughen John McConaghy
Peter Anthony McKenzie
Judith Anne McKinnon
Wendy Jane McWilliam
Allison Margaret Mealey
Kathryn Margaret Milton
Rosalind Ann Nethercott
Wendy Norris
Lynette May O'Connor
Ann Elizabeth Oliveri
Penelope Gay Olsen
James Anthony Opie
Paula Palermo
Mary Lucy Panozzo
Geoffrey Gray Parkes
Jeanette Anne Paterson
Douglas Arthur Payne
Paul Knud Petersen
Ann Pettifer

DIPLOMA IN TEACHING(Continued)

Lili Popovska
 Janette Adele Power
 Denise May Preston
 Liberina Lidia Rea
 Martha Rebic
 Catherine Gail Rodgers
 Athena Sarakatsianos
 Rosemary Gay Sewell
 Marion Ruth Short
 Jo-Ann Robin Sommerville
 Richard Ralph Spiewak
 Lena Stefanovska
 Michelle Lynne Stewart
 Joy Tapsas
 Christine Anne Taylor
 Peter John Tenhave

Shirley June Thompson
 Philippa Anne Thorn
 Jennifer Anne Tobias
 Suzanne Peggy Turnbull
 Mark James Van Smeerdijk
 James Arthur Wagner
 Glen James Walker
 Denis Francis Connolly Wann
 Michele Mary Warburton
 Kay Annette Watler
 Louise Ailsa Whittaker
 Donna Elizabeth Williams
 Bronwyn Elizabeth Wilson
 Alison Aimee Youll
 Dianne Dragica Zignic

COMPLETED BY EXTERNAL STUDY

June Abbott
 Marion Joy Abbott
 Caroline Elizabeth Adam
 Sheila Anne Adam
 Helen Baker
 Kathryn Susan Barlow
 Christine Ann Bedford
 Betty Bodel
 Pauline Bonner
 Colleen Mary Bosnich
 Carolyn Gay Brereton
 Roslyn Patricia Rushell
 Pamela Jean Carter
 Dianne Helen Chadston
 Dawn Lorelle Chadwick
 Elizabeth Mary Charuk
 Margaret Patricia Cheesman
 Pamela Ann Cobourn
 Christine Cole
 Helen Dianne Colquhoun
 Frances Beverley Connon
 Nola Christine Cookman
 Rosemary Jean Covel
 Colleen Mary Cureton
 Anne Margaret Damien
 Deanne Llewellyn Dare
 Barbara Irene Darmanis
 Anne Patricia Dooley
 Maureen Carol Drinnan
 Janice Aimee Durnham
 Frances Cheryl Echin
 Janet Mary Evans
 Marion Elizabeth Fallon
 Jennifer Rosemary Fitzgerald
 Marian Josephine Fountain
 Ann Roslyn Fox
 Pamela Margaret Fox
 Barbara Morea Gapps
 Colleen Clarice Hawkins
 Ivan Elizabeth Hemmings
 Sandra Carolyn Henstock
 Janice Rae Hoon
 Maureen Ellen Hooper
 Margaret Elizabeth Howison

Margaret Mary Huxley
 Bronwyn Christine Ingle
 Pamela Kay Jarman
 Jennifer Johnson
 Maree Jolly
 Valerie Pauline King
 Susan Carol Lacey
 Glenys Elizabeth Landon
 Mary Veronica Lawson
 Linda Heather Leslie
 Kaye Susan Lewis-Driver
 Linda Vera Lockett
 Valda Jean Low
 Helen Patricia Malins
 Kay Elizabeth Mattress
 Sandra Mearns
 Helen Elizabeth Meers
 Virginia Anne Mooney
 Valentina Nadj
 Lynnette Noble
 Catherine Anne Noyes
 Elvira Anne O'Neill
 Janette Hazel Packham
 Beverly Helen Pedder
 Dawn Gaye Plumb
 Anna Martha Policinski
 Sandra Anne Power
 Susan Gai Richards
 Patricia Mary Monica Ridgw.
 Anne Patricia Roby
 Wendy Rogers
 Kerry Irene Rowley
 Lynn Scott
 Margaret Ann Shaw
 Jeanette Vera Sillett
 Rosemary Jane Slack
 Suzanne Sneddon
 Jill Annette Sopher
 Heather Margaret Stevens
 Ulrike Renate Swzec
 Gay DeBurg Thew
 Marie Bernadette Thew
 Jacklin Thomas
 Patricia Alwyn Tribe

Phyllis Claire Trowbridge
 Margaret Rose Turner
 Lynette Sandra Walker
 Loris Christina Adele Waterhouse
 Beverley Joylene Waugh
 Ann Elizabeth Weekes
 Margaret Rae Weir
 Denise Frances Wendt
 Sylvia White
 Shirley Kathleen Williams
 Ronald Alan Williamson

Pamela Wilson
 Georgina Beverly Wilson-Greene
 Margaret Alice Wolfe
 Anne Louise Wood
 Janice Clarice Wood
 Darlene Jennifer Woods
 Elaine Joan Worsley
 Christine Winifred Yates
 Georgina Marilyn Yerbury
 Frances Elizabeth Young

DIPLOMA IN TEACHING

English/History

Awarded with Distinction

June Anne Kryger

 Christopher John Bell
 Gordon Ferguson Cannon
 Helen Agota Ciufici
 David Kenneth Hargrave
 Wendy Fay Knox

Marjaleena Koskinen
 Kerry Glen Middleton
 Suzanne Smith
 Cheryl Lea Tolland
 Kathryn Therese Wakeford

Mathematics

Awarded with Distinction

Robert James Burke

 Bruce Douglas Bews
 Tony Peter Giorgio
 Dene Lawrence Herbert
 Craig Edward Hughes

Peter Bruce Lorking
 Peter William Lucas
 Donna Joy McGuffie
 Christine June Stewart

Physical Education

Kerry Andrianakos
 Stephen John Armstrong
 Brian William Battese
 Robert Andrew Bradley
 Tracey Louise Cross
 Tracey Leeanne Davey
 Drew Isaac
 Heather Jan Lephord
 Kathryn Gwenda Martin

Peter William McDonald
 John James McVeigh
 Ian Perdrisat
 David Pitchford
 Susan Margaret Saunders
 Rick Desmond Taylor
 Susan Mary Whitby
 Wayne Morris Williamson

DIPLOMA IN HEALTH AND PHYSICAL EDUCATION

Kenneth Rodney Barnes
 Frederick James Booth
 Winifred Anne Bright
 Annette Houtman

Ian George Ludeke
 Richard Ivan Ruse
 Jennifer Lyn Seymour

BACHELOR OF EDUCATION (PHYSICAL AND HEALTH EDUCATION)**Awarded with Distinction**

Christopher Robert Butler
 Kerryn Maree Macaulay
 Robert John Neal
 Rosemary Neal
 Andrew Phillip Watt

Graeme Geoffrey Anderson
 Lynette Mary Barry
 David Michael Braithwaite

Lynn Bunter
 Jennifer Anne Burns
 Vicki Maree Davenport
 Carole Lynne Eagleton
 Annette May Gill
 Mary Elizabeth Henderson
 Grant Donald Hunt
 Graham Anthony Irvin
 Judith Elizabeth Lydford

BACHELOR OF EDUCATION (PHYSICAL AND HEALTH EDUCATION) (Continued)

Daniel Patrick McGoldrick
 Ian Bruce McKenzie
 Philip James Pearson
 Roberto Alejandro Rojas
 Ross Geoffrey Thomas

Nichola Susan Vance
 Ingrid Dianne Wass
 Paul William Wright
 Mary Yatras

GRADUATE DIPLOMA IN EDUCATION**Awarded with Distinction**

Ann Clifford
 Judith Hall
 Suelen Phillips
 Fiona Lesley Reynolds

Susan Joy Westwood

 Bernadine Seraphine Carvalho
 Julie-Ann Johnston

GRADUATE DIPLOMA IN EDUCATIONAL STUDIES**Environmental Education****Awarded with Distinction**

Carmel Mary Godfrey
 Christopher Denis Senior
 David John Sivell
 David Robert Worthington

Warren Argerakis
 Gary Alexander Baxter
 Colin Burgin
 Jennifer Gaye Cameron
 Mark Alexander Cameron
 Mary Patricia Catley
 William Boyack Chalmers

Joanne Dawn Defaveri
 Robert John Freeman
 Kerry Ann Hellmuth
 Michael Gregory McCabe
 Christopher Roy Peters
 James Pettit
 Helen Rodwell
 Corinne Cheryl See
 Mary Genevieve Sivell
 Trevor Summerside
 Ian Robert Thompson
 Ashley Kevin Unger

Secondary Mathematics Education**Awarded with Distinction**

Anne Murdoch
 Brian William Underwood

Richard Edward Young

APPOINTMENTS, RESIGNATIONS AND PROMOTIONS

APPOINTMENTS

Name	Designations	Department
Mr. P.A. Bailes	Lecturer	Computing Science
Dr. B.L. Cambourne	Principal Lecturer	School of Education
Mr. Y.C. Cheah	Tutor	Electrical & Computer Engineering
Dr. C.D. Cook	Lecturer	Electrical & Computer Engineering
Dr. D.J. Corson	Lecturer	Education
Dr. J.F. Guest	Lecturer	Economics
Dr. N.A.B. Gray	Lecturer	Computing Science
Mr. F.A. Gul	Senior Lecturer	Accountancy
Mr. K.W. Hale	Senior Lecturer	Accountancy
Dr. R.M. Henry	Lecturer	Psychology
Dr. M.J. Hough	Principal Lecturer	School of Industrial & Administrative Studies
Mr. A.C. Hutton	Lecturer	Geology
Mr. P.C. Hyland	Lecturer	Philosophy
Ms. E. Jeneid	Lecturer	School of Creative Arts & Community Studies
Dr. A.J. Johnston	Lecturer	Civil & Mining Engineering
Mr. G. Moliterno	Lecturer	European Languages
Mr. P.J. McKerrow	Lecturer	Computing Science
Miss D. O'Neill	Tutor	Accountancy
Mr. S.K. Ooi	Lecturer	Accountancy
Mrs. A.K. Parker	Senior Tutor	English Literature & Drama
Ms. N.J. Ronan	Tutor	Psychology
Mr. C.E. Rovere	Tutor	Chemistry
Dr. R.A. Russell	Lecturer	Electrical & Computer Engineering
Mr. E.H. Salib	Tutor	Physics
Mr. A.R. Smith	Lecturer	School of Education
Dr. A.K. Tieu	Lecturer	Mechanical Engineering
Dr. E. Von Nagy Felsobuki	Research Associate	Chemistry
Dr. R.J. Whelan	Lecturer	Biology

RESIGNATIONS

Dr. R.A. Facer	Senior Lecturer	Geology
Mrs. P.R. MacKay	Lecturer	Accountancy
Mrs. F.E. Roberts	Senior Tutor	History
Dr. T. Higginbotham	Lecturer	Computing Science
Mrs. H.A. Maitland	Tutor	Psychology
Dr. P. Cerone	Research Associate	Mathematics
Ms. M. Greenwell	Tutor	Accountancy
Mr. N.C. Canosa	Tutor	Accountancy
Mrs. J. Hiddlestone	Tutor	Psychology
Miss D. O'Neill	Tutor	Accountancy
Mr. G.J. Hayes	Senior Tutor	English Literature & Drama (retired)
Mr. F.W. Osborne	Principal Tutor	School of Creative Arts & Community Studies (retired)
Professor R. Duncan	Professor	History (retired)
Assoc. Professor S.E. Bonamy	Associate Professor	Mechanical Engineering (retired)

Mr. G. Moliterno	Lecturer	European Languages
Mr. S.K. Ooi	Lecturer	Accountancy
Mr. P.C. Hyland	Lecturer	Philosophy
Mr. E.H. Salib	Tutor	Physics
Mrs. M.J. Heyligers	Lecturer	School of Creative Arts & Community Studies (retired)
Ms. E. Jeneid	Lecturer	School of Creative Arts & Community Studies (retired)
Mr. H. Akitt	Senior Lecturer	External Studies Unit (retired)
Mr. N. Aylward	Senior Lecturer	External Studies Unit (retired)
Miss M.L. Powell	Lecturer	School of Creative Arts & Community Studies
Mrs. A.K. Parker	Senior Tutor	English Literature & Drama

PROMOTIONS

Name

Dr. M.J. Boyd	Senior Lecturer	Lecturer	Civil & Mining Engineering
Mr. D. Davis	Senior Lecturer	Lecturer	English Literature & Drama
Mr. P.V. George	Senior Tutor	Tutor	Economics
Dr. C.M. Gulati	Senior Lecturer	Lecturer	Mathematics
Mr. H.A.L. Jeanjean	Senior Tutor	Tutor	European Languages
Miss H.A. Maitland	Senior Tutor	Tutor	Psychology
Dr. D.G. Montgomery	Senior Lecturer	Lecturer	Civil & Mining Engineering
Dr. D.R. Murray	Senior Lecturer	Lecturer	Biology
Dr. G.C. Nanson	Senior Lecturer	Lecturer	Geography
Dr. J.M. Wieland	Senior Lecturer	Lecturer	English Literature & Drama
Mr. P.L. Shepherd	Senior Lecturer	Lecturer	School of Creative Arts & Community Studies

STUDY LEAVE AND PROFESSIONAL EXPERIENCE LEAVE 1982

Name	Department	Duration (Weeks)	Principal Location
Prof. M.G.A. Wilson	Geography	26	Australia
Mr. B.H. Andrew	Accountancy	22	U.K.
Prof. J. Blake	Mathematics	26	U.K./U.S.A.
Dr. P.G. Burton	Chemistry	22	Europe/U.K.
Dr. P.C. D'Alton	Sociology	26	Australia
Dr. P.C. Arnold	Mech. Eng.	1	U.K./Europe
Dr. A.J. Fielding	Education	20	U.K.
Miss D.M.E. Gillam	English Language	13	U.K.
Dr. G. Ianziti	European Languages	22	Italy
Dr. J.L. Morris	Psychology	19	U.K./U.S.A.
Mr. P.T. Castle	Mathematics	4	U.S.A.
Mr. M.B. Scott	English Lit. & Drama	26	U.K./Canada
Mr. R.K. Wilson	Accountancy	48	U.K./ Australia
Mr. L.J. Splitter	Philosophy	34	Australia/ U.K./U.S.A.
Dr. R.N. Chowdhury	Civil & Mining Eng.	25	U.S.A./India
Dr. Z. Herceg	Elect. & Comp. Eng.	20	Local/U.S.A./ U.K.
Prof. S.A. Marshall	Mech. Eng.	23	Malaysia
Prof. R. Johnston	H.P.S.	20	Local/U.S.A./ U.K.
Dr. T.S. Horner	Mathematics	26	U.S.A./Canada
Dr. G. Mockler	Chemistry	22	U.S.A.
Miss D.L.M. Jones	English Lit. & Drama	24	U.K.
Mr. G. Moore	Physics	26	Australia/ Canada
Dr. C.L. Keys	Geography	26	Australia
Assoc. Prof. L.L. Viney	Psychology	4	U.S.A.
Dr. D.S. Hawley	European Languages	25	France/U.S.A.
Assoc. Prof. N. Standish	Metallurgy	3	Canada
Mr. P.C. Geekie	School of Education	52	U.S.A.
Mr. B. Harper	School of Education	24	Local
Mr. B.E. Murray	School of Education	26	Australia/U.S.A.
Mr. R. Gall	School of Education	16	U.K.

BUILDINGS AND SITE DEVELOPMENT

There were no major buildings authorised for construction in 1982. A Science II building has been designed to tender stage but has not been included in the Commonwealth Government approved programme for 1983. The need for this building has been recognised by the Commonwealth Tertiary Education Commission in its report for the 1982-84 Triennium and it is hoped the project may be approved for commencement in 1984.

The Minor Building and Site Development Projects in 1982 comprised:

Upgrading of electrical supply and replacement of main switchboard to No. 1 sub-station	\$ 39,000
Construction of a laboratory extension to Buildings 6 and 7 for Mechanical Engineering	\$110,000
Construction of extension to North Wing of Social Science Building to provide office accommodation for 16 staff	<u>\$181,000</u>
	<u>\$330,000</u>

The upgrading of the No. 1 substation which involved structural modification was at the urgency of the Illawarra County Council and has been a long standing pressing need.

The extension to Buildings 6 and 7 provided much needed laboratory space for Mechanical Engineering, which could not be provided elsewhere or by alterations to other buildings. It is hoped that design funds become available for the planning of a new Administration Building; the construction of which would allow the space of the present inadequate Administration Building to be released to Engineering departments.

The extension to the North Wing of the Social Science Building provided office accommodation for one Head of School and fifteen lecturers. This space requirement was a direct consequence of the federation of the University and Institute of Education.

FULL-TIME STAFF AS AT 30TH APRIL, 1982

ACTIVITY AND GRADE/LEVEL	FULL-TIME			FULL-TIME EQUIVALENT OF PART-TIME	TOTAL
	M	F	T		
<u>ACADEMIC ACTIVITIES</u>					
<u>Teaching and Research - Academic</u>					
- Professor	17		17		
- Associate Professor/Reader	17	1	18		
- Senior Lecturer	51	4	55	6.800	
- Lecturer	69	8	77		
- Senior Tutor/Demonstrator/Assistant Lecturer	9	3	12		
- Tutor/Demonstrator/Teaching Fellow	7.5	5	12.5	15.214	
	170.5	21	191.5	22.014	213.514
<u>SUB-TOTAL ACADEMIC</u>					
<u>General - Technical</u>					
- Technical Officer	8	4	12		
- Technical Assistant	46	16	62		
<u>General - Administrative</u>		22.3	22.3		
	54	42.3	96.3		96.3
<u>SUB-TOTAL GENERAL</u>					
<u>Research Only - Academic</u>					
- Lecturer	3		3		
- Junior Positions	6.97	9	15.97	0	
	9.97	9	18.97		18.97
<u>SUB-TOTAL ACADEMIC</u>					
<u>Research Only - General - Technical</u>					
- Technical Officer	10	2	12		
- Technical Assistant	2	1	3		
<u>Research Only - General - Administrative</u>		1	1		
<u>SUB-TOTAL GENERAL</u>	12	4	16		16
<u>TOTAL ACADEMIC ACTIVITIES:</u>	246.47	76.3	322.77	22.014	344.784

ACTIVITY AND GRADE/LEVEL	FULL-TIME			FULL-TIME EQUIVALENT OF PART-TIME	TOTAL
	M	F	T		
<u>ACADEMIC SERVICES</u>					
Library - Professional	7	17	24		24
- Other	3	24	27	2	29
Sub-Total	10	41	51	2	53
Computing	13	7	20		20
Teaching and Learning Centres - Academic/Professional	0.5		0.5		0.5
- Other	2	1.86	3.86		3.86
Sub-Total	2.5	1.86	4.36		4.36
Printing	3	2	5		5
TOTAL ACADEMIC SERVICES	28.5	51.86	80.36	2	82.36
<u>STUDENT SERVICES</u>					
Counselling and Accommodation	1	1	2		2

GENERAL UNIVERSITY SERVICES					
Administration	- Chief Administrative Officers - Senior Administrative Officers - Administrative Officers - Administrative Assistants - Clerks, Typists, etc. - Other	5.5 4 4 10 15 1	5.5 4 4 12 48.6 2		5.5 4 4 12 48.6 2
	Sub-Total	39.5	36.6	76.1	76.1
Buildings & Grounds	- Building, Planning & Maintenance - Professional - Tradesmen - Other - Maintenance of Grounds - Cleaning and Caretaking	1 13 7 9 14	1 13 8 10 22		1 13 8 10 41.5
	Sub-Total	44	10	54	73.5
	TOTAL GENERAL UNIVERSITY SERVICES	83.5	46.6	130.1	149.6
INDEPENDENT OPERATIONS					
Student Residences University Bookshops Union Staff		9	1 3 9	1 3 18	1 3 44
	TOTAL INDEPENDENT OPERATIONS	9	13	22	48
	TOTAL ALL STAFF	368.47	188.76	557.23	626.744

FACULTY/DEPARTMENT	FULL-TIME ACADEMIC STAFF BY DEPARTMENT									
	Reference Date - 30th April, 1982									
	TEACHING AND RESEARCH					RESEARCH ONLY				
	Prof.	Assoc. Prof. Reader	Senior Lect.	Lect.	Senior Tutor	Tutor	TOTAL	Lect.	Junior Position	TOTAL
<u>ENGINEERING</u>										
Civil & Mining		2	3	4		1	10			
Electrical & Computer	1	1	3	3		1	9			
Mechanical	1	2	1	6			10		1	1
Metallurgy	1	2	3	2			8			
SUB-TOTAL	3	7	10	15		2	37		1	1
<u>COMMERCE</u>										
Accountancy	1		5	3.5		1.5	11			
Economics			2	8	1	1	12			
SUB-TOTAL	1		7	11.5	1	2.5	23			
<u>HUMANITIES</u>										
English Language	1		1	1			3			
English Literature & Drama			3	2	2		7			
European Languages	1		1	4	1		7		1	1
History	1	1	4	2	1		9			
History & Philosophy of Science	1			3.5	1		5.5		2.97	2.97
Philosophy	1		1	4			6			
SUB-TOTAL	5	1	10	16.5	5		37.5		3.97	3.97

WOLLONGONG INSTITUTE OF EDUCATION

Full-time staff as at 30th April, 1982.

Designation	Males	Females	Total
Academic Activities			
Above Senior Lecturer	5	-	5
Senior Lecturer	15	1	16
Lecturer	35	13	48
Other Teaching Staff	-	-	-
TOTAL	55	14	69
Non-Academic Staff			
Supporting Academic Activities			
Audio Visual	2	-	2
Attendants	3	5	8
Computer Operator	1	-	1
TOTAL	6	5	11
Library Staff			
Professional	-	4	4
Other	-	6	6
TOTAL	-	10	10
Administrative Staff			
Directors, Deputy Directors	2	-	2
Chief Administrative Officers	1	-	1
Senior Administrative Officers	1	-	1
Administrative Officers	1	-	1
Administrative Assistants	3	1	4
Clerk, Typist etc.	1	15	16
TOTAL	9	16	25
Building Planning and Maintenance Staff			
Professional	-	-	-
Tradesmen	2	-	2
Other	5	-	5
TOTAL	7	1	7
TOTAL STAFF	77	45	122

GRANTS AND DONATIONS

Australian Research Grants Scheme Projects

Assay of Neurotransmitters Released from Hippocampal Slices and Evaluation of Neuronal Markers	2,000
Australian Science Policy: The State of University Research	13,962
Britain, The United States and The Korean War	3,250
Changing Definitions of Social Psychology	5,960
Devonian Biostratigraphy of The Capertree Geanticline	2,500
Dynamics of Cavitation Damage to Turbomachinery	4,076
Experimental Investigation on the Shedding of the Vorticity by Sharp Edges and the Computation of Axisymmetric Vortex Sheets	17,670
Fast Photo-Electric Photometry of Astronomical Sources	9,500
Mathematics Models of Growth and Form in Sea Shells and Plants	14,536
Metabolite Levels in the Cytosol and Mitochondria of Plant Leaf Cells	9,700
Microwave Wavefront Reconstruction	3,900
Nature of Chemical Bonds to Metals Precise Theoretical Studies	5,000
Photosynthesis and Osmoregulation in Marine Algae	25,010
Plastic Properties of Ductile Sheet Metals	7,200
Properties and Applications of Shape Memory Alloys	17,638
Solid State Spectroscopy Electronic and Vibrational Spectra of Solids	10,000
Studies on the Evolution of Mammalian Endothermy	8,650
Transitions: A Study of Men Experiencing Change in Retirement	13,000
The Transition of the Chronically Ill from Hospital to Community	12,500
Vitamin C Megatherapy. The Sociology of Scientific Controversy	7,600

National Health and Medical Research Council

Application of GC-MS (Chemistry)	1,859
Ovum Transport (Mathematics)	2,398
Spectrographic Analysis (Biology)	3,100

National Energy Research Development and Demonstration Council

Coal Storing Bin Design - (Mechanical Engineering)	43,530
Electrostatic Precipitators - (Electrical Engineering)	23,664
Low Rank Oil Shales - (Geology)	8,278
Pneumatic Conveying of Coal - (Mechanical Engineering)	19,262
Reflectance of Oriented Vitrinite - (Geology)	6,493
Studies on Coal Carbonisation - (Geology)	46,549

Special Purpose Funds (Research)

Aerosol Research Fund (Chemistry)	200
Amino Acid Research (Biology)	592
Australian Accounting Research Foundation (Accountancy)	5,020
Australian Institute of Nuclear Science and Engineering Post Doctoral Fellowship (Chemistry)	11,523
Australian Iron and Steel Assoc. Prof. N. Standish (Metallurgy)	5,058
Australian Welding Research Association Postgraduate Award (Chemistry)	7,408
Auto Monitor and Forward Feed (Chemistry)	8,908
Biology Special Research (Biology)	1,424
Bourke Pre-School Research and Support (Education)	800
Bulk Solids Handling (Mechanical Engineering)	4,853
Colonial Sugar Refining Company Julia Creek Oil Shales Analysis (Chemistry)	39,925
Department of Education (Australia) Prof. R. Johnston (History and Philosophy of Science) Prof. S. Hill (Sociology)	34,381
Department of Health (Australia) Counselling of Patients (Psychology)	53,935
Department of Science and Technology Prof. R. Johnston (History and Philosophy Science)	5,000
Education Research and Development Committee Analysis of Children Retelling - Dr B. Cambourne (Institute of Advanced Education)	803
Analysis of French and Italian Programs Dr. D. Hawley (European Languages)	21,825

Growing Up in Illawarra Dr. W. Mitchell (History)	8,474
Processing and Comprehending Technical Prose - Dr. B. Cambourne (Institute of Advanced Education)	8,990
Electrical Research Board Transport of Pulverised Coal Dr. P. Arnold and Dr. A.G. McLean (Mechanical Engineering)	50,016
Esso Australia Rundle Oil Shale Analysis (Geology)	5,511
Family and Schooling in the Illawarra Dr. W. Mitchell (Education)	600
Geology Fuel Research	6,572
Geology General Donation	7,785
Geology and Petrophysics Research	500
Hippocampal Spike Research (Biology)	1,600
History of Nursing (History)	500
Illawarra Handicapped Persons Trust Illawarra Regional Leisure Committee (Institute of Advanced Education)	8,297
Industrial Minerals Research (Geology)	50
Learning Environment Research (Education)	2,300
Mechanical Engineering Research and Development	692
Ministry of Aboriginal Affairs (Economics)	6,233
Monier Resources Fly Ash Research (Civil Engineering)	6,750
National Parks and Wildlife Department Bushfire Research (Geography)	1,000
New South Wales Science and Technology Council (History and Philosophy of Science)	4,000
Postgraduate Scholarships Account	
Department of Biology	1,000
Department of Chemistry	1,500
Department of Civil Engineering	500
Department of Education	500
Department of English Literature and Drama	250
Department of Geography	1,025
Department of History	2,000
Department of History and Philosophy of Science	1,250
Department of Mathematics	500
Department of Mechanical Engineering	500
Department of Metallurgy	500
Department of Psychology	2,000
Department of Sociology	1,750
Population Research (Geography)	373
Radio Research Board Dr. F. Paoloni (Electrical Engineering)	2,050

Research and Development in Mining Engineering (Department of Civil and Mining Engineering)	231
Research Fund for Community Studies Rheem Australia Limited	4,000
Commercial Solar Project (Mechanical Engineering)	9,775
Social Welfare Research Centre Ethnicity and Class (Centre for Multicultural Studies)	1,952
Migrant Safety Report (Centre for Multicultural Studies)	2,010
South Coast Research Account (Geography)	450
State Planning and Environment Commission Air Analysis (Chemistry)	1,500
Sundry Donation for Research	
Department of Accountancy	20
Department of Civil and Mining Engineering	103
Department of Chemistry	1,500
Department of Electrical and Computer Engineering	4,200
Department of Mathematics	675
Department of Metallurgy	3,990
Department of Physics	406
UNESCO - Literature Search -(Sociology)	5,000
L.L. Viney Research Fund - (Psychology)	1,440
Water Research Foundation of Australia Flood Mitigation Programmes (Economics)	2,500
X-Ray Diffusion Research Fund (Geology)	308

Special Purpose Funds

(Scholarship, Bursaries, Prizes, etc.)

Australian Institute of Nuclear Science and Engineering Studentships - Mathematics	8,246
- Chemistry	5,105
Australasian Institute of Mining and Metallurgy - Mining Prize	100
- Metallurgy Prize	100
- Geology Prize	100
Australian Institute of Metals (Port Kembla) Prize - Metallurgy	80
Australian Institute of Physics (NSW) Prize - Physics	50
Australian Psychological Society Prize - Psychology	200
Australian Society of Accountants Prize - Accountancy	300
Australian Institute of Management - Scholarship in Management Studies	2,000

Peter Beckmann Memorial Prize in Physical Chemistry	44
Biology Prize	79
Blue Circle Cement (Maldon) - Metallurgy Prize	25
Clothing and Allied Trade Union Postgraduate Award	1,264
Darryl Condon Memorial Prize	22
Commonwealth Banking Corporation Prize	20
Corporate Affairs Commission Prize	100
G.W. Daniels Prize	50
Evan Phillips Memorial Prize	249
Foundation Prize in Geology	95
Bert Halpern Memorial Prize	122
Illawarra County Council Award	6,350
Austin Keane Memorial Prize	105
John Lysaght Australia Prize - Metallurgy	30
Mathematics Prize Fund	159
Miscellaneous Workers Union Postgraduate Award History	6,000
N.S.W. Teachers Federation Postgraduate Award	10,750
Gina Savage Prize - Faculty of Science	50
Staff Prizes in Physics	30
Statistical Society of Australia (NSW) Mathematics Prize	50
Sperry Univac Postgraduate Award in Computing Science	6,000
Touche Ross and Co. Prize in Accountancy	50
A.J. and L. Waters Geology Prize	237
Western Mining Prizes - Mining	450
Special Purpose Funds (Others)	
Australian Council of Trade Unions History of the A.C.T.U.	976
Australian Institute of Management - Donation for Books	800
A.D.A.B. - Oil and Coal Shale Course	15,424
A.I.L.D.P. - Computing Science Project	4,400

Department of Science and Technology - Japan/Australia Agreement - Biology	7,500
Sundry Donations - English Language	306
- English Literature and Drama	680
Theatre South - P.D.S. Appeal	10,118
The Illawarra Credit Union - Employment Scholarship	6,000
Wollongong University Sundry Donations	6,135

FINANCIAL STATEMENTS

STATEMENT OF BALANCES (ALL FUNDS) AT 31 DECEMBER, 1982

1981 \$		1982 \$	
430,664	DR.	432,457	DR.
83,722		54,594	
242,996		214,429	
1,281,576		2,061,288	
<u>18,297</u>		<u>2,441</u>	
<u>\$1,191,927</u>	Total Funds	<u>\$1,950,599</u>	
	Represented by:		
	Investments -		
	Government Securities	200,000	
	Semi-Government Securities		
800,000	maturing later than 12 months from balance date)	700,000	
	Interest Bearing Deposits		
800,000	maturing later than 12 months from balance date)	1,350,000	2,250,000
<u>1,600,000</u>			
	Current Assets -		
7,820	Cash on hand	10,870	
	Semi-Government Securities		
	maturing within 12 months from balance date)	100,000	
	Interest Bearing Deposits		
5,700,000	maturing within 12 months from balance date)	7,498,556	
105,071	Sundry Advances	105,287	
1,055,511	Debtors	557,162	
49,306	Central Store Inventory (Note 6)	77,987	
<u>711,201</u>	International House (Note 7)	211,646	8,756,375
<u>7,168,917</u>			11,006,278
<u>8,768,917</u>			
	Less Current Liabilities -		
866,455	Cash Overdrawn	1,132,961	
	Sundry Creditors and Accrued Expenses	54,808	
4,777,000	Government Grant Refunded in Advance (Note 10)	5,570,000	
<u>711,201</u>	Westpac Bank Loan for International House	211,646	6,969,215
<u>6,338,558</u>			
	Provisions -		
917,728	Long Service Leave (Note 11(i))	922,671	
	State Superannuation Pension Subsidy (Note 11(ii))	656,577	
328,563	Professional Superannuation & Pension Scheme Non-Contributory Pension (Note 11(i))	479,359	
414,061	Repairs, Maintenance and Replacements	80,100	
<u>58,000</u>			
<u>1,718,132</u>		<u>2,136,687</u>	
<u>7,450,990</u>			<u>9,105,785</u>
<u>\$1,191,927</u>		<u>\$1,950,599</u>	

ANNEXURE A

THE UNIVERSITY OF WOLLONGONG

(CENTRAL RECURRENT FUND)

STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDED 31 DECEMBER, 1982

1981 \$		Note		1982 \$
<u>Income</u>				
15,739,000				19,851,000
28,502				115,668
-				<u>248,000</u>
<u>15,767,502</u>				<u>20,214,668</u>
<u>Expenditure</u>				
9,068,162	Academic Activities	2		12,103,867
2,249,566	Academic Services	3		2,676,570
223,488	Student Services	4		248,577
4,197,992	General University Services	5		5,199,184
<u>110,022</u>	Public Services			<u>83,710</u>
<u>15,849,230</u>				<u>20,311,908</u>
81,728	Deficiency for Year			97,240
<u>(43,022)</u>	Add - Adjustments for Prior Years			<u>3,202</u>
18,706				100,442
<u>411,958</u> DR.	Accumulated Deficiency as at 1/1/82			<u>430,644</u> DR.
430,644 DR.				531,106 DR.
<u>Less - Wollongong Institute of Education</u>				
	Accumulated Deficit as at 21/5/82	12	134,487	
	Add - Additional Grants received by University		230,000	
	- Adjustment for prior period		<u>3,136</u>	
			<u>233,136</u>	<u>98,649</u>
<u>430,644</u> DR.	Deficiency at 31 December, 1982			<u>\$ 432,657</u> DR.

ANNEXURE BTHE UNIVERSITY OF WOLLONGONGBUILDING PROJECT GRANTSTATEMENT INCOME AND EXPENDITURE FOR THE YEAR ENDED 31 DECEMBER, 1982

<u>1981</u>		<u>1982</u>
<u>\$</u>		<u>\$</u>
	<u>Income</u>	
<u>228,000</u>	Commonwealth Government Grants	<u>330,000</u>
	<u>Expenditure</u>	
<u>228,000</u>	Minor Building Projects, etc.	<u>330,000</u>

ANNEXURE CTHE UNIVERSITY OF WOLLONGONGSPECIAL EQUIPMENT GRANTSTATEMENT INCOME AND EXPENDITURE FOR THE YEAR ENDED 31 DECEMBER, 1982

<u>1981</u> <u>\$</u>		<u>1982</u> <u>\$</u>
	<u>Income</u>	
<u>747,000</u>	Commonwealth Government Grant	<u>1,010,000</u>
	<u>Expenditure</u>	
558,930	New Equipment	795,136
28,080	Replacement Equipment	27,523
<u>146,172</u>	Computing	<u>216,467</u>
<u>733,182</u>		<u>1,039,128</u>
(13,818)	Deficiency for Year	29,128
<u>69,304</u>	Accumulated Balance at 1 January 1982	<u>83,722</u>
<u>\$ 83,722</u>	Balance at 31 December 1982	<u>\$ 54,594</u>

ANNEXURE D

THE UNIVERSITY OF WOLLONGONG

SPECIAL RESEARCH GRANT

STATEMENT INCOME AND EXPENDITURE FOR THE YEAR ENDED 31 DECEMBER 11, 1982

1981 \$		1982 \$
	<u>Income</u>	
<u>90,000</u>	Commonwealth Government Grant	<u>105,000</u>
	<u>Expenditure</u>	
79,931	Salaries and associated charges	100,172
9,009	Maintenance (materials, etc.)	4,149
<u>1,060</u>	Research Publications, Books and Periodicals	<u>679</u>
<u>\$ 90,000</u>		<u>\$ 105,000</u>

THE UNIVERSITY OF WOLLONGONG

SPECIAL PURPOSE FUNDS (RESEARCH)

STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 31 DECEMBER, 1982

	<u>Balance at 1 January 1982</u>	<u>Receipts</u>	<u>Payments</u>	<u>Balance at 31 December 1982</u>	
Australian Research Grants Committee	13,482	193,652	190,400	16,734	
National Health and Medical Research Council	6,576	3,606	11,132	950	DR.
National Energy Research, Development and Demonstration Council	4,345	147,775	208,781	56,661	DR.
Other Grants and Donations	<u>218,593</u>	<u>371,658</u>	<u>334,246</u>	<u>255,505</u>	
5.	<u>242,996</u>	<u>714,691</u>	<u>745,059</u>	<u>214,628</u>	

ANNEXURE F

THE UNIVERSITY OF WOLLONGONG

OTHER SPECIAL PURPOSE FUNDS

STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 31 DECEMBER, 1987

	Balance at 1 January 1987	Receipts	Payments	Balance at 31 December 1987
Scholarships, Bursaries & Prizes	22,639	67,799	71,089	19,349
Special Services Appropri- ation Account	256,545	206,592	248,000	215,137
General Development Account	570,626	549,650	165,479	954,797
Advanced Education Develop- ment Account	-	462,086	34,422	427,664
Professional Superannuation & Pension Scheme				
Managed Funds Accounts	6,781	21,513	-	28,294
Widows Annuity Accumu- lation Fund	28,889	3,873	2,598	30,164
General	254,423	693,442	625,990	321,875
Trust, Suspense & Working Accounts	<u>141,673</u>	<u>2,062,846</u>	<u>2,140,511</u>	<u>64,008</u>
\$	<u>1,281,576</u>	<u>4,067,801</u>	<u>3,268,089</u>	<u>2,061,288</u>

THE UNIVERSITY OF WOLLONGONG

APPENDIX L

INTERNATIONAL HOUSE

INCOME AND EXPENDITURE STATEMENT FOR YEAR ENDED 31 DECEMBER, 1982

1981 \$	<u>INCOME</u>	1982 \$
45,256	Australian Government Grant	50,300
301,627	Residential Fees	323,748
8,770	Conferences	2,486
11,122	Miscellaneous	21,187
1,605	Registration Fees	-
7,324	Interest Earned	19,065
1,955	Application Fees	2,205
<u>56,546</u>	Grants for Porter Street Access Road	<u>-</u>
<u>436,205</u>		<u>418,991</u>
	<u>EXPENDITURE</u>	
	<u>Administration</u>	
250	Contributions and Grants	300
54	Entertainment	195
18,572	Electricity	23,116
558	Garbage Collection	4,467
1,306	Insurance	1,531
823	Miscellaneous	-
6,559	Oil & Gas	9,106
730	Office Expenses	1,332
320	Printing & Photocopying	675
8,587	Telephone	13,433
546	Transportation	198
2,990	Wardens Allowance	2,998
4,719	Water Rates	4,959
33,859	Salaries & Wages	37,935
-	Legal Expenses	-
<u>79,873</u>		<u>100,245</u>
	<u>Cleaning and Maintenance</u>	
54,885	Porter Street Access Road	-
4,899	Cleaning Materials	3,856
14,883	Furniture & Equipment	10,087
3,762	Laundry & Dry Cleaning	4,266
375	Gardening & Landscape	406
2,202	Minor Repairs Electrical	4,647
5,136	Minor Repairs Non Electrical	2,651
22,761	Major Repairs & Maintenance	10,108
19,113	Replacement Soft Furnishing	14,826
198	Uniforms & Protective Clothing	-
<u>63,890</u>	Salaries & Wages	<u>70,253</u>
<u>192,084</u>		<u>121,600</u>

THE UNIVERSITY OF HONGKONG

INTERNATIONAL HOUSE

INCOME AND EXPENDITURE STATEMENT FOR YEAR ENDED 31 DECEMBER 1982

1981 \$	EXPENDITURE (Cont'd)	1982 \$
	<u>Other</u>	
103,792	Catering	192,266
20,603	Loan Interest	34,283
<u>8,797</u>	Loan Reduction of Principal	<u>-</u>
<u>133,192</u>		176,549
	<u>Provisions</u>	
1,062	Long Service Leave	3,716
<u>29,000</u>	Repairs, Maintenance & Replacement	<u>29,000</u>
<u>30,062</u>		<u>32,716</u>
<u>435,211</u>		<u>431,110</u>
1,006	Excess of Expenditure over Income	12,119
	<u>Less: Advance from University of Wailongong</u>	263
<u>3,223</u>	Transfer from Provisions for Long Service Leave	<u>-</u>
(2,217)	Deficiency for Period Ended 31 December 1982	11,856
<u>11,288</u>	<u>Less: Accumulated Surplus at 1st January 1982</u>	<u>14,297</u>
13,505		2,441
<u>792</u>	<u>Add: Adjustments for Prior Years</u>	<u>-</u>
<u>514,297</u>	Balance as at 31st December 1982	<u>\$ 2,441</u>

THE UNIVERSITY OF WOLLONGONG

NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED 31 DECEMBER, 1982

Note 1. ACCOUNTING POLICIES

- (i) General Fund, Special Research Grant, Special Equipment Grant, Minor Works Grant and International House - an accrual basis of accounting is adopted in recording transactions for these accounts. Income earned or due and expenditure incurred is brought to account in the year to which it applies.
- (ii) Special Purpose Funds and Australian Research Grants Committee - a cash flow basis of accounting is used to record the transactions within these funds.
- (iii) Non-Monetary Assets - with the exception of stores stock, monetary assets only are carried forward in the Statement of Balances. Other non-monetary assets are written off in the year of purchase against the relevant grant.

Note 2. ACADEMIC ACTIVITIES

Teaching and Research

	<u>1981</u>	<u>1982</u>
Salaries	7,208,396	9,677,017
Salary Related Costs	970,593	1,468,194
Maintenance	517,985	530,932
Conference and Study Leave	84,447	99,989
New Appointment Expenses	45,890	44,144
Other	<u>5,377</u>	<u>24,209</u>
TOTAL Teaching and Research	<u>8,832,688</u>	<u>11,846,485</u>

Research Only

Salaries	203,371	221,892
Salary Related Costs	10,126	12,717
Maintenance	21,977	22,447
Other	<u>-</u>	<u>306</u>
TOTAL Research	<u>235,474</u>	<u>257,362</u>
TOTAL ACADEMIC ACTIVITIES	<u>\$9,068,162</u>	<u>\$12,103,847</u>

Note 3. ACADEMIC SERVICESLibrary

Salaries	930,003	1,067,696
Salary Related Costs	68,610	98,570
Purchase of Books, Periodicals etc.	576,101	726,212
Maintenance	61,988	51,349
Other	254	729
TOTAL Library	1,636,956	1,944,556

Computing

Salaries	252,326	264,492
Salary Related Costs	20,191	23,890
Supplies	49,475	68,538
Maintenance	94,547	96,260
Other	3,013	2,825
TOTAL Computing	419,552	456,005

Other Academic Services

Education Resources Centre	92,102	130,181
Scientific Workshop	70,217	95,627
Printery	30,739	50,201
TOTAL Other Academic Services	193,058	276,009
TOTAL ACADEMIC SERVICES	\$ 2,249,566	\$ 2,676,570

Note 4. STUDENT SERVICES

Health Services	445	672
Counselling	50,095	55,566
Scholarships	74,553	77,745
Union/Sports Association	98,395	114,594
TOTAL STUDENT SERVICES	\$ 223,488	\$ 248,577

Note 5. GENERAL UNIVERSITY SERVICESAdministration

Salaries	1,585,813	1,882,046
Salary Related Costs	180,503	279,033
Maintenance	136,185	110,542
Travel	36,745	31,005
Other	73,868	102,264
TOTAL Administration	2,013,114	2,404,890

Note 5. GENERAL UNIVERSITY SERVICES (Contd.)Overheads

Postage	66,571	93,004
Telephones	116,922	133,211
Advertising	68,599	56,970
Insurance	46,423	62,082
Contributions	45,459	83,491
Furniture	58,043	84,960
Power, Lighting and Heating	249,546	393,501
Printing and Stationery	64,490	57,342
Other	44,005	67,315
TOTAL Overheads	760,058	1,031,876

Building and Grounds

Salaries	1,052,177	1,327,302
Salary Related Costs	62,557	72,742
Materials	279,451	328,030
Water and General Rates	29,712	33,980
Other	923	364
TOTAL Building and Grounds	1,424,820	1,762,418
TOTAL GENERAL UNIVERSITY SERVICES	\$4,197,992	\$ 5,199,184

Note 6. STORES STOCK

Stock holdings in the University's Central Store were valued at \$72,987 at 31 December, 1982. The stock was valued using the most recent purchase price as cost for each item.

Note 7. LOAN FOR INTERNATIONAL HOUSE

Represents the amount still being financed by bank loan following the acquisition of International House in 1980. During the year ended 31 December, 1982 principal on the \$211,203 loan from the Bank of New South Wales was increased by \$263 to \$211,466.

Note 8. DEFERRED LIABILITIES

The sum of \$35,299 is outstanding as at 31 December, 1982 on a loan from the State Bank of New South Wales for the acquisition of the Vice-Chancellor's Residence.

Note 9. CONTINGENT LIABILITIES

- (i) As at 31 December, 1982 outstanding Loan Guarantees provided by the University under the University of Wollongong Staff Members Housing Loans Scheme with The National Australia Bank total \$16,317.
- (ii) The University is engaged in a hearing before the Equal Opportunity Tribunal. The estimated costs of litigation before the tribunal are \$55,000, excluding damages. Further litigation is possible if the case is appealed.

Note 10. GOVERNMENT GRANTS RECEIVED IN ADVANCE

In December, 1982 an amount of \$5,570,000 was received as an advance against 1983 Australian Government Grants to the University.

Note 11. PROVISIONS

- (i) The balance of Provision for Non-Contributory Pension Superannuation Scheme as at 31 December, 1982 is \$479,389. Based on an actuarial assessment \$87,231 was set aside in 1982 to provide members with a pension of up to 25% of salary on retirement.
- (ii) The balance of Provision for Long Service Leave as at 31 December, 1982 is \$922,423. The accrued liability for long service leave in respect of employees with ten (10) years or more service is \$2,769,414.
- (iii) The balance of Provision for State Superannuation Pension subsidy as at 31 December, 1982 is \$654,577. The estimated liability for members 55 and over, for units currently held, and assuming a life expectancy of 15.27 years after retirement is in excess of \$2,000,000.

Note 12. WOLLONGONG INSTITUTE OF EDUCATION

As at 21 May, 1982 the Wollongong Institute of Education federated with the University. At that date an accumulated deficit of \$134,487 was taken into the University's accounts. The University, after federation, received an additional government grant of \$230,000.

