In accordance with Clause 8(ii) of the Order in Council of 3 March 1982, I present the Annual Report by the Council of Chisholm Institute of Technology on the operations of the Institute during the year ended 31 December 1986, together with a financial statement in respect of that year.

For and on behalf of Council,

Geoffrey Vaughan
Director
(from 9 February 1987)
1. Chisholm Council

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Richard J. Trembath (from 14 October 1986)
BSc(Melb), Med(Monash), PhD(Texas)
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Secretary to Council
Dr Graham Trevaskis
BA, BEd(Melb), MA, EdD(Columbia), TPTC
The year 1986 was notable for a number of changes to the focus of activities of the Institute. The educational program was strengthened by the addition of nursing as a field of study. Not only was the Diploma of Applied Science (Nursing) course provisionally accredited but the School of Nursing was set up and the Foundation Dean of Nursing was appointed. The building program for the School began and plans for contacts with community health agencies put into place. This program will integrate with existing fields of study and so give opportunities for a richer and more diverse course offering by Chisholm than is general.

The physical resources of Chisholm were further developed on both campuses. At Frankston, a general teaching building was approved and construction commenced in November. A Technology Tower/Student Union complex at Caulfield was commenced in January 1986, with both types of facilities rectifying two seriously deficient physical facilities.

The setting of goals for a policy of achieving equal opportunity and employment opportunity followed the appointment of Chisholm’s first full-time Equal Opportunity Officer. The implementation of Government policy in this area, along with those other policies relating to students and staff, was a significant feature of the administrative procedures established throughout the year and to continue in 1987.

A major report was undertaken by Council of the financial management and associated administrative procedures of the Institute during the year. The levels of financial expertise and the planning and development of financial management accounting reporting systems were strengthened. This activity has set the basis for enhancing Chisholm requirements for the next five years.

These changes given obviously do not cover all those that could be listed here. The examples merely serve to show the variety and significance of those events special to 1986.

By the same token, 1986 reflected the further enhancement and development of current Institute activities. For example, the Schools of study continued to develop more relevant courses and educational experiences for their students. The Institute continues to be a centre for State, interstate and international scholars and visitors and continues to develop, expand and extend its ties with its academic and general communities.

Above all, the year 1986 continued to see recruitment of students and staff able to make fullest use of the resources made available by the Institute.

Geoffrey Vaughan
Director
(from 9 February 1987)

Clive K. Coogan
President, Chisholm Council
(1986)
New Director Appointed

Dr Geoffrey Vaughan, MSc(Sydney), PhD(Melb), FRACI, FPS, FSHPA, MPSGB, MAEI A, began his appointment as Director of Chisholm with the commencement of the 1987 academic year. Dr Vaughan was a research scientist in the pharmaceutical sciences and held the positions of lecturer, senior lecturer and Head of School at the Victorian College of Pharmacy before being appointed Deputy Dean of the College in 1968, Dean of the Graduate School of the College in 1970, and Dean and Director of the Pharmacy College in 1979.

Dr Vaughan's appointment saw the retirement of the Acting Director, Mr Gerry Maynard, who had acted in the position for 17 months since the resignation of Mr Patrick Leary as Director in 1985. Mr Maynard had previously been Associate Director (Planning and Resources) and before that, acting Dean of the then School of Computing and Information Systems. He had worked at the Institute for 17 years and was instrumental in the setting up of Chisholm's computer education.

Buildings and Property

Construction of the $15 million Technology Tower/ Student Union complex on the corner of Railway and Princes Avenues commenced in January 1986 with a scheduled completion date of September 1987. By December, the Tower structure had been completed and the structure of the Student Union building was completed with the exception of the roof.

A review of the use of certain spaces within the project was being carried out during the latter part of the year. Plans for car parking to be associated with the project and in relation to the Caulfield campus generally were also being developed as the year progressed.

Approval of the various planning stages for the General Teaching building at Frankston was received from the Commonwealth Tertiary Education Commission during the year and construction commenced in November 1986. The final contract sum to provide 2850m$^2$ gross floor area for additional teaching space and office accommodation was $3.117 million and the scheduled completion date was October 1987 as at the end of 1986.

In December the State authorities also approved funding of $4.720 million for the construction of Nurse Education facilities at Frankston. This building was scheduled to commence construction in January 1987 and be completed by February 1988.

A Child Care Centre was established on the Frankston campus at a cost of $135,000 and opened in August under the management of the Chisholm (Frankston) Community Child Care Centre Committee. Capital funds were provided by the Institute and in the form of loans to the Student Union and the Management Committee.

Minor works and refurbishing projects carried out during the year included:

Caulfield Campus

- The supply and installation of cable for an emergency evacuation communications system to all buildings;
- The installation of smoke doors, hose reels and fire hoses and the refurbishing of 'E' Block fire escape as part of a plan to upgrade fire services;
- Improvements to extraction and ventilation of 'B' Block;
- The relocation of Mechanical Engineering and refurbishing areas vacated by TAFE;
- Internal renovation and landscaping of the Child Care Centre.

Frankston Campus

- Alterations to the Library area in 'A' Building to provide space for the Nursing collection and a seminar room;
- Installation of a separate water main for the fire service.

Equal Opportunity

During 1986 the Institute moved towards its policy goal of achieving equal educational and employment opportunity with the appointment...
of a full-time Equal Opportunity Officer, Ms Anne Rennie.

The Federal Affirmative Action (Equal Employment Opportunity) Act 1986 offers Chisholm the exciting opportunity to identify and modify employment practices which limit the career opportunities of women. During 1986 the Chisholm Equal Opportunity Committee took the initial steps in the planning and development of an Affirmative Action program.

The Equal Opportunity Committee identified the action necessary to implement existing Chisholm Equal Opportunity and Sexual Harassment Policies, and also areas in which further policy development is necessary.
The Student Body
In line with government policy, the Institute sought to maximise the intake of new undergraduate full-time students consistent with the total quota assigned to Chisholm by the Victorian Post Secondary Education Commission (VPSEC). This year, for the first time since 1973, the Victorian State Government (as part of its Youth Guarantee Initiative) funded undergraduate tertiary places. This provided 130 Equivalent Full-Time additional places for new-to-course undergraduate enrolments at Chisholm.

The actual numbers of students enrolled by campus at 30 April 1986 were 5,447 at Caulfield and 1,507 at Frankston, an increase of 84 students (or 1.57 percent) at Caulfield and 259 students (or 20.75 percent) at Frankston.

The School of Art and Design, the David Syme Business School and the School of Social and Behavioural Studies all operate courses on both campuses. The School of Education is based exclusively on the Frankston campus and the Faculty of Technology is exclusive to the Caulfield campus other than for one undergraduate course in computing.

In 1986, Chisholm was required to achieve a minimum new-to-course undergraduate enrolment target of 1,752 Equivalent Full-Time Students (EFTS). The actual new-to-course enrolment was 1,800.5 EFTS.

The effects of the low new-to-course post-graduate intake in 1985 and the policy to maximise the intake of new-to-course full-time undergraduates in 1985 and 1986 are shown in the above graph.

The ratio of male/female enrolments decreased to 1.47 in 1986 from 1.53:1 in 1985. The ratio for new enrolments was 1.28:1 in 1986 compared to 1.30:1 in 1985.

The 1985 student body included 288 overseas students, 167 students who claimed some disadvantage and 71 students who required special teaching facilities and/or aids.

Tertiary awards totalled 1,176. These included awards to 247 post-graduates and 30 overseas students.
Academic Programs

School of Art and Design

During 1986, the Graduate Diploma in Fine Art was re-accredited for a further five years, allowing for the continued development of this course within the Department of Fine Art.

The Fine Art Scholarship ($1,000) was awarded to Mr Michael Gray, top second year student to help with costs during his third year of study.

Mr C. Pyett was appointed Head of the Department of Fine Art in July 1986.

A new computer laboratory was established with the addition of 15 Macintosh micro-computers as teaching aids and typesetting facilities for students of Graphic Design.

Flett, Henderson and Arnold awarded a $500 scholarship to Deborah Westhorp, most promising second year student.

There was a strong demand for graphic design courses with 700 applicants applying for 60 places.

The School was able to offer the Graduate Diploma in Ceramic Design on the Frankston Campus during 1986.

Two new part-time courses were offered for study on the Frankston campus in 1986. They were: BA (Fine Art) (Craft) — requiring six years of part-time study, and the Diploma of Graphic Design — first year only, taking two years part-time. Both of these courses attracted a full intake.

The first group of part-time students graduated in the Associate Diploma of Ceramic Design at Frankston. An exhibition of their work was held at the Post Office Gallery, Red Hill.

David Syme Business School

In 1986, the School was responsible for teaching more than 2,400 students. The fact that more than half of business students were part-time reflects the School's commitment towards providing relevant education to the business community, in addition to pre-employment training.

Academic developments during the year further demonstrated that commitment. Major developments were:

- two new micro-computer training centres operating at both campuses. The Frankston campus centre was opened by the State Minister for Education the Hon. Ian Cathie on 7 March.
- the David Syme Business School Advisory Board, under the Chairmanship of Mr Peter Macdougall, continued to play an important role in providing advice and counsel to the Dean and the DSBS Executive.
- two laboratories of 20 IBM compatible micro-computers were purchased from a VPSEC grant and installed in the libraries on both campuses.
- IBM (Aust) Ltd donated two IBM AT micro-computers and one IBM XT micro-computer plus dot matrix printer as part of their commitment to business schools throughout Australia. The School was using these micro-computers for the development of an in-house Videotex service; preparation of presentation material using the software package 'PC-Storyboard' donated by IBM; and demonstration of packages to post-graduate students.

The School increased its student numbers at the Frankston campus by almost 30 per cent in 1986. Graduate Diploma courses in Logistics and Agribusiness gained accreditation to run at the Frankston campus. Also, the Bachelor of Business (Business Administration) progressed to the final stages of accreditation. This new undergraduate course, to be offered at Frankston, has a significant component in human resource management and one otherspecialisation option (for example, Marketing, Logistics, Agribusiness, Banking and Finance or Office Administration).

School of Education

Re-accreditation was granted to the Diploma of Teaching (Early Childhood) and the Graduate Diploma in Outdoor Studies in 1986. Planning for the four year end-on Bachelor of Education course continued.

Places were in keen demand for the Diploma of Teaching (Primary), the Diploma of Teaching (Early Childhood) and the fourth year of the Bachelor of Education course.

Graduate Diploma courses in Art Education
and Outdoor Studies attracted full quotas and provided opportunities for specialist studies. Off-campus programs such as school camps and leadership training weekends were highly successful in providing a wide range of experiences for students.

School of Nursing
The Institute prepared throughout the year for the introduction of Nursing Studies to the Frankston campus. The quota of 1987 student places for the Diploma of Applied Science (Nursing) was set at 23. Planning was to lead to the development of a program approved eventually to have some 520 students in the undergraduate course.

One of the main steps taken was to draw up the course accreditation document. Two consultants assisted the Institute: Dr Bess Deakin (until May) and Ms Barbara Gookey (May to October). Decisions were made as part of these procedures related to the curriculum philosophy, the criteria for selection of students, the organisation of the academic year, temporary accommodation in 1987, and planning for additional buildings, identifying clinical agencies, preparing budgets and linking the proposed nursing studies to the existing educational services of the Library, Computer Centre, Educational Development Unit and Frankston Community Services. Valuable associations continued to be made with community health agencies.

Not the least of the activities was the liaison established with the David Syme Business School, the Schools of Education and Social and Behavioural Studies, and the Faculty of Technology, all of whom would carry responsibilities for teaching in the course. Academic regulations to guide students and staff and legal agreements for use with clinical agencies were drafted. Position descriptions for the Dean and the Clinical Co-ordinator were written.

The other major step was to develop and design the nursing building planned to be built and occupied by the end of 1987.

The year closed with a School of Nursing constituted and its first Dean, Ms Dorothy Angell, and Clinical Co-ordinator, Ms Glenice Ives appointed. The course was provisionally accredited with a full revised submission to be made by the end of first semester 1987. A total of 23 direct entry students were admitted and provisions for the VTAC entry put in place. The nursing laboratory, the Office of the School of Nursing and staff accommodation were being prepared and the existing science facilities were undergoing minor works projects to prepare them for nursing studies.

Nursing as a new field of study was fully placed in the administrative and educational structures of the Institute.

School of Social and Behavioural Studies
Academic Program development provided a major focus of activity during the year, with new courses and subjects being developed across the School.

The approval by VPSEC for the teaching of a Literature major strand was welcomed, and subject to accreditation, should be offered for the first time in Semester One 1988.

A new minor sequence in Labour Studies was developed. It will involve a multi-disciplinary approach across the three Departments and options will also be available from David Syme Business School subjects. It will be first offered in Semester One 1987.

Teaching in the new Graduate Diploma in Multi-Cultural Studies commenced. With its complete introduction the course will involve several distinct strands. A strong demand for places in 1986 should continue.

In the Applied Sociology major, a new upper division subject, 'Sociology of the Family', was developed by Dr J. Birjak and has proved popular. Another new subject, 'Technology and Society', developed by Dr I. Marshall as an elective, has been well received by students in the BA and other courses since it was first offered in the summer of 1985/86.

Four new subjects were developed for inclusion in the Graduate Diploma in Community Education and will serve to strengthen the community-based component of teaching.

Four units of Highway and Traffic Engineering were introduced into the Associate Diploma in Police Studies. The Chisholm course is the only Police Studies course in Australia to include such subjects.
Proposals for a new final year optional subject (Health Psychology) and for a coursework Master of Arts in Occupational Therapy were developed and approved by the Course Committee in Applied Psychology. The Master of Arts has been listed in the Institution plan for introduction in the 1988-1990 Triennium.

Faculty of Technology
1986 was a year of consolidation for the Faculty and its Divisions—Digital Technology (DDT), Engineering and Industrial Technology (DEIT), Information Technology (DIT), and Mathematical and Environmental Sciences (DMES).

On the recommendation of its Microcomputer Working Party the Faculty established a 15 station microcomputer laboratory for use by staff and students of the Faculty, early in 1986. The laboratory is equipped with an electronic surveillance system and every computer is fitted with an electronic alarm.

Division of Digital Technology — The Physics strand in the Bachelor of Applied Science (multi-discipline) continued to be one of the strong thrusts of the course.

The Applied Physics Department offers three electives which are the most popular electives in the multidiscipline course. These are Computer Imaging, which continues to attract approximately 50 students, Advanced Computer Imaging, with a quota of 20 students and Physical Astronomy, which remains popular with 45 students.

The Physics Department also services the new Engineering course and the Bachelor of Applied Science (Digital Technology) course. The Engineering Physics subject is the sole Physics subject the engineering students are taught and responses indicate it is a very good and interesting course.

The staff of the Applied Physics Department also service the undergraduate course of Digital Technology and the post-graduate Diploma of Computer Graphics.

Nine Master of Applied Science by research candidates worked in the Department during 1986.

Department of Robotics and Digital Technology — During 1986, the first intake of students into the Bachelor of Applied Science (Digital Technology) completed their final year and all were successful in obtaining immediate employment. As the course had been initially accredited for three years, documentation, including a revised syllabus, was prepared during the year and successfully reaccredited.

Also completing reaccreditation procedures during the year was the Graduate Diploma in Robotics, which was reaccredited for a further five years.

A major equipment purchase during the year was a set of five workstations for VLSI design. These workstations, which operate the design tool software developed at the CIMA Division of Technisearch Ltd., are being used for advanced undergraduate and graduate circuit design subjects.

During 1986 an X-ray computerised tomography laboratory was established. An EM11010 facility was donated by the Royal Melbourne Hospital and installed with the assistance of Australian General Electric Co. This development was a consequence of the activities of the Computer Imaging Group. The work of the original group has developed to the stage where there are now two sub groups: Computer Image Processing and Computerised Tomography.

1986 saw the Division successfully blend its main thrust of education with other research, consultancy, and administration activities.

Division of Engineering and Industrial Technology — The Graduate Diploma in Project Management (formerly Process Plant Project Engineering) received reaccreditation during Semester One and was offered for the first time since 1981. A total of 22 students enrolled for the subjects offered in Semester Two and 18 successfully completed them.

The Graduate Diplomas in Structural Computations and Process Computer Systems were reaccredited and conducted in 1986.

The Civil Engineering Concrete Canoe Club again participated in the inter-colleges race series sponsored by the Concrete Institute of Australia.

A one-week field camp was held for third and fourth year Civil Engineering students at Falls Creek. A variety of projects were under-
taken for the Falls Creek Tourist Area Management Committee and the National Parks and Wildlife Service.

A wide range of projects were undertaken by third and fourth year students, dominated by computer and microprocessor control and software engineering topics.

Chisholm again dominated the Universities and Colleges Section of the Shell Mileage Marathon Competition gaining first and second places in this Section and second and third overall.

ICI provided sponsorship of $10,000 for a new vehicle to compete in the 1987 competition and work began on the new design in September. Four staff, five graduates and three current students are involved in the design team.

The Mileage Marathon video tape of the 1986 competition was sold to the Shell Oil Company and distributed to 24 local libraries. Copies of the tape were distributed by TAFE and the State School Library.

Fourteen Mechanical Engineering and 10 Electrical Engineering students were involved on the Solar Vehicle Project in 1986 with 13 staff and approximately 12 members of supporting companies providing supervision, technical expertise and support. Sponsorship valued in excess of $30,000 was raised during the year.

The Solar Vehicle Project Team conducted a survey of the Darwin-Adelaide route during November and gathered valuable data on road and climatic conditions and on the performance of solar cells and ancillary equipment.

Division of Information Technology — 1986 was a year of continuing demand for computing graduates of courses operated by the Division of Information Technology. Because of the increasing competitiveness for Chisholm computing graduates, organisations are taking new approaches to attract them. These approaches include the presentation of scholarships to first and second year students, and vacation employment for second year students.

A number of developments took place in 1986 which hopefully will lead to significant initiatives in the future. These included applied research with external organisations on various information technology areas, such as expert systems and software development. Strong interest was shown by private academic institutions in South-East Asia in using the Division's Bachelor and Masters Degree programs to complete their graduate education as full fee-paying students.

The Division continued the development and refinement of its academic programs. In Semester One, the Division continued the expansion of its Master of Applied Science (Computing) by coursework, through the second intake.

The Graduate Diploma in Computing was reaccredited in May and demand exceeded available places by a ratio of six to one.

The Division undertook a major review of the subjects taught in the undergraduate Bachelor of Applied Science (Computing), and began the preparation of details for its reaccreditation in 1987.

Throughout 1986, the Division's presence on the Frankston campus continued to grow.

Arising out of the interests of staff was a Data Base Seminar which proved to be very successful. It attracted considerable interest with both the academics and computing professionals.

It was a year of expansion of facilities within the Division. The access of staff offices to the Institute's central computing facilities enabled, in second semester, a prototyping of communication between staff and students eliminating the need for paper in the submission and assessment of assignments. The experiences gained from this prototyping will prove invaluable in the development of additional communication links.

Division of Mathematical and Environmental Sciences — The Department of Mathematical Sciences and the Department of Chemistry and Biology within the Division, continued to provide service teaching on both campuses as well as managing the Bachelor of Applied Science (Multi-discipline).

The Chemistry and Biology Department continued to offer both undergraduate and post-graduate studies, with a strong emphasis on research work. One Chemistry student was awarded his Master of Applied Science degree in 1986, three students successfully completed
their Masters degrees and 14 others were working towards Master Degrees within the Department.

The Department also provided service teaching during the year to the School of Education, the School of Social and Behavioural Studies and the Division of Engineering and Industrial Technology. The Department, and particularly Dr Jan Bapat, was also involved in the development and accreditation of the new Bachelor of Nursing course to commence in 1987. The servicing of Bioscience, Microbiology and Basic Physics and Chemistry in this course will be a continuing responsibility for 1987.

The Department combined with the Department of Mathematical and Environmental Sciences to plan a coursework Masters in Environmental Quality Management, which will be submitted for accreditation during 1987.

Registrar's Department in general, with high staff turnover and reviews of the operations of two key areas — Student Administration and Public Relations.

Intensive work on budget management and planning resulted in the reduction of a $62,000 accumulated deficit to $7,000 and in a budget allocation for 1987 for operational costs which was realistic.

The problem of Repetitive Strain Injury, which was major in 1985 and early in 1986, diminished during the year, with alteration in work practices and the introduction of ergonomic furniture. There were no new occurrences in 1986 and all staff who had lost time from work through RSI were returned to full working hours by the second half of the year.

Considerable attention was given to a review of the regulations and administrative processes associated with unsatisfactory academic performance of students, with the involvement of the Academic Board and staff throughout the Institute. The review was still in progress at the end of the year, but one amendment to Regulations had already been made.

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**Academic Services**

**Academic Registrar's Department**


The year was one of change for the Academic

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**Student Enrolments - EFTS as at April 1986**

<table>
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<th>1986</th>
<th>1985</th>
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<tr>
<td>Overall</td>
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<td>4966</td>
</tr>
<tr>
<td>Frankston</td>
<td>2500</td>
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<tr>
<td>Caulfield</td>
<td>715</td>
<td>1390</td>
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**EFTS by Schools of Study**

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<tr>
<td>SSBS</td>
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<tr>
<td>Education</td>
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<td>392.5</td>
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<tr>
<td>DSBS</td>
<td>175.5</td>
<td>1868.75</td>
</tr>
<tr>
<td>Art &amp; Design</td>
<td>481.5</td>
<td>523</td>
</tr>
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</table>
Academic Secretariat
The Secretariat continued to provide support to the Academic Board and its Standing Committees, the Academic Programs Committee and Higher Degrees and Research Committee during the year. During 1986, the Academic Board membership was altered via election to give a greater proportion of elected positions in its composition. However, this structure was not in complete accordance with the model suggested by the Ministerial Working Party on College Councils and Committees. Thus, another election was foreshadowed.

During the year, the Secretariat provided assistance with documentation for the Diploma of Applied Science (Nursing) course which was planned to commence in 1987. The Secretariat maintained its service to all aspects of course accreditation and reaccreditation. During the year, the Accreditation Board accepted the use of Method 3 of accreditation, in which the Institute is responsible for all the procedures leading to a recommendation from the Council to the Accreditation Board concerning the continuance of a course of study.

Records and Telematics
In 1986, the accent was on the improvement of Institute-wide Telecommunications Services.

A growing demand for speedier inter-campus, local and international communications highlighted the need to purchase ‘state-of-the-art’ technology, such as digital telex and two new ‘group 3’ facsimile machines, one on each campus. Since the installation of the new equipment, particularly the facsimile machines, Records Administration staff resources are being optimally used for the provision of Registry, Mail and Communications Services to the Institute. An encouraging and interesting repercussion has been that this section receives a regular request from the Head of Department, Communication Studies, to demonstrate the applications of this equipment to groups of students of the Graduate Diploma in Communication Studies.

One of the major problems for this Section has been the production and updating of an internal telephone/departmental information directory. In 1986, the problem was partly...
solved by producing an alphabetical directory using a word processor. In 1986, the Directorate acknowledged that a new data base for both telephone directory and a telecommunications accounts and management system was urgently required. The recommendation, made by the Manager of Records and Telematics, to explore the feasibility of using the VAX linked system in the Business Technology Centre was approved. The purchase of the necessary hardware and the co-operation of Mrs Lynne Endacott, Division of Digital Technology, Faculty of Technology, will enable the production of a comprehensive telephone and information directory in 1987. This can be updated daily by telephone operators on each campus from terminals in their offices. On-line access to the data base will be available to all departments linked to the Business Technology VAX computer.

A submission to VPSEC for a replacement PABX on the Caulfield campus to replace the obsolete ARD-591, was made in August 1986, but was unsuccessful. A further submission will be made in 1987.

Student Administration Department

1986 was a year of change for the Student Administration Department. It was a difficult period, with high staff turnover, and with new staff at all levels endeavouring to keep the operation functioning. The problem of Repetitive Strain Injury which was serious in this area at the beginning of the year, was minimised as a result of new work practices and procedures and there were no further recurrences in 1986.

In August, a review of the staffing and operations of the Department was carried out. This resulted in recommendations for an additional staff member, alterations in staffing structures and classifications, and a review of procedures.

The Student Records computer system continued to cope with the increased demands of the Institute, although signs emerged that a major reorganisation of procedures would soon be required.

The conferring of an award for many students is the culmination of their academic career and, as such, it is important that the graduation ceremonies proceed faultlessly. The Student Administration Department again successfully organised these events.

Similarly, the Institute Open Day, coordinated by the Admissions Officer, was a marked success.

Involvement in staff development was strong in 1986, with staff at all levels undertaking development programs.

The senior staff of the Department continued their involvement on Institute Committees such as the General Staff Development Committee, the Admissions Committee, Student Loans Committee, Communications Working Party, Promotions Working Party, Computer Centre Users Committee, and the Hay Position Evaluation Group.

Externally, the Assistant Registrar (Students) was a member of the VTAC Form and Guide Committee, and the Admissions Officer participated in the VTAC Working Party to Review Procedures and acted as Regional Coordinator and Liaison Officer with the TAFE Board on TOP accreditation and moderation.

Public Relations Office

During the year, the Public Relations Office underwent a number of changes. A Desktop Publishing System was installed to increase productivity and reduce the costs of publishing the Chisholm internal newspaper, Chisholm Gazette, and other publications, which was achieved. Savings were in the order of tens of thousands of dollars. A new Publications Officer, Mrs Sonja King was appointed to replace Ms Sue Coutie in April, and a new Public Relations Officer, Mr John Wilkins, was appointed in October to replace Mr Geoff Heard.

The frequency of the Gazette was changed from fortnightly to monthly, and a new format was prepared for 1987. Publications included seven editions of the Gazette, the 1987 Handbook, and one brochure. The shortfall in the number of Gazette editions was due to unfilled staff positions. In addition, the Office produced 227 press advertisements on behalf of the Institute as a whole and various departments, and 27 media releases, gaining good coverage in the press.

A Public Relations Working Party, convened to advise the Directorate, drafted an Institute
Policy on Public Relations for consideration by the Council and policies on Schools Liaison and Open Day. Working under PEP, Mr Brian Seddon of the School of Art and Design prepared a Graphic Standards Manual for publication as the first part of a proposed Public Relations Manual. Further parts of this manual were in preparation at the year’s end.

Community Services
During 1986, Community Services focused on developing closer teamwork relationships between the various services and service providers on both campuses. In-service meetings for professionals involved in service from both campuses were held and outside speakers were invited to provide input on professional and community resource options.

A major achievement for Community Services in 1986 was the establishment of a Group Care Centre for children on the Frankston campus funded by the Department of Social Security and set up with a close working relationship with the Frankston City Council. This development brings parity in terms of group care to Frankston students; Caulfield students have had access to such care for 11 years.

The inaugural Campus Interview Program for prospective graduates was implemented on the Frankston campus, also bringing parity with Caulfield where employer interviews are regularly carried out by the Careers Advisory Service.

At Caulfield, two new Counsellors were appointed to replace counsellors, one of whom had resigned and the other having moved to the Frankston campus. The Counselling Service consolidated its delivery of service and implemented a successful Counselling Peer Supervision Group.

Outreach activities during 1986 included:
• Health programs including: Immunisation, First-Aid Training, Blood-pressure Surveys, advice about sexually transmitted diseases (including AIDS), were carried out by the Health Service.
• Relaxation and stress reduction training sessions were run for members of the Chisholm community.
• Chaplains (Uniting Church, Catholic, Anglican and Jewish) were involved closely with counselling and health practitioners.
• The Legal Service funded by Commonwealth Legal Aid Commission, continued to employ Ms Marilyn Beebe, Southern Communities Legal Service lawyer.
• Child care: the second year of operation of Chisholm funded staff (funded by the Union and the Department of Social Security with the co-operation of the Caulfield City Council) saw a significant increase of child care enquiries and placements. A joint Family Day Care Scheme with the Caulfield City Council is working well and provides valuable resources both to the Chisholm and surrounding Caulfield community.
• Continuation of work on Committees and Boards: Community Services now have a representative on several Schools Boards, Working Parties (e.g., RSI, Occupational Health and Safety) and Council Committees. Community Services is also involved with local community projects such as: Peninsula Hospice Services, Peninsula Inter Agency Support Group, Caulfield Workers.
• Affiliations with hospitals, e.g., Southern Memorial and Austin.
• Publications in the Naked Wasp of material on topics such as Alcohol Awareness, Sexually Transmitted Diseases, Contraception, Epilepsy, Skin Cancer and its prevention, Blood Pressure Stress, Tertiary Assistance (Austudy) and Child Care Advice.
• Community Services during 1986 continued to provide high quality service to Chisholm students, staff and to the outside community when resources permitted. Chisholm Community Services also maintained and further developed close working relationships with local government, state and federal instrumentalities.

Computer Centre
The Centre experienced a varied and peaked profile in 1986. The largest ever peak of logins in the middle of Semester One was followed by a dramatic trough of inactivity, the lowest on record. Semester Two had a poor to average us-
age pattern, once again highlighting its annual load balancing problem which has grown worse since 1985.

A new computing facility, the Pyramid 98Xe UNIX system, was installed in July. It arrived too late to take on academic processing loads, but heavy use is expected in 1987. Some load balancing was attempted by transferring specialised software from heavily overloaded systems, to the new Pyramid, the most powerful system in the selection.

Overall user registrations were down, probably due to the introduction of departmental micro laboratories. Despite this, usage statistics were high.

New services introduced in 1986 proved popular, including loans of dial-in modems, for those with micros at home. Statistics of dial-in usage show an increase in these services is needed. (The Centre will increase dial-in lines by 50 per cent in 1987). The most popular time for operation at home, on-line to Chisholm facilities was between 8pm and 1am throughout the year, Tuesdays in particular. Interesting is the fact that Saturday and Sunday between 8pm and 1am was more popular than any other period between 9am and 3pm. The 24 hour/ seven day terminal rooms were heavily populated.

The Graphics Centre usage rocketed. Work by the students of Art and Design and Robotics ensured the equipment saw little inactivity. New ergonomic furniture and software facilities considerably altered the Centre’s viability.

VICNET was utilised by a small number of Chisholm students via their lecturers. A major drawback to its use was overcome by Computer Centre staff, by developing software which enables line printer listings generated on the RMIT CYBER system, to be printed automatically on any of Chisholm’s printers via parameters. More Colleges are now connected to VICNET, so the availability of varied systems became interesting.

The Computer Centre pursued Communications Education for its staff, ready for the time when the Institute-wide broadband network is in place. Staff attended many seminars, formal training courses, special interest groups, conferences and supplier presentations, particularly in networking related topics.

The data communications line between the Caulfield and Frankston campuses was upgraded from 48Kb to 72Kb in July, allowing the Centre additional carrying capacity. Funds to enable the Centre to take advantage of that added transmission will become available at the beginning of 1987.

Computer Centre equipment is now entering its eighth year of operation, some units being installed in early 1979. With the exception of the new UNIX system, the central academic computing facilities are now old architecture and need replacing.

Educational Development Unit

The Educational Development Unit was the subject of an Institute review during 1986. With the resignation of the Head of EDU, Dr Charles Noble, in February, the administration of the EDU was made the responsibility of the Dean of the School of Education. The Dean of Education delegated a number of administrative tasks to Ian Walker, Senior Lecturer, School of Education.

The EDU Working Party on Methods of Teaching and Learning was convened by Ian Walker to determine the methods of teaching employed throughout the Institute and to offer assistance to any academic staff member who wished to investigate all the methods available. A questionnaire on Methods of Teaching and Learning was tested in a department of the Institute.

Language Development Section — In 1986 Language Development activities enjoyed great expansion due to the leadership of Jill Anderson as Co-ordinator, the three-year appointment of Rosemary Cerehan as full-time Senior Tutor and the secondment of Margaret Scott from the School of Social and Behavioural Studies to represent the section on the Frankston campus.

Approximately 500 students across the full range of disciplines were assisted with their academic literacy, oracy and study skills. Many of these students were seen on a regular basis, by means of individual consultations and appropriate section courses. On average, 80 percent of the students were speakers of English as a sec-
The section was able to offer services to part-time students on two evenings per week, in addition to the provision of self-access materials and 'distance' consultations. Chisholm staff were also provided with in-services on improving student writing and study skills.

Advisory and Evaluation Section — Advisory services in 1986 were severely restricted, owing to a lack of staff in the section, and other extraneous circumstances.

Of the two days per week of the only maintained position, one was devoted to development of Videotex in conjunction with the Technology Services Section of the David Syme Business School.

The Videotex development has been assisted through co-operation with Syscorp Pty. Ltd., a supplier of videotex editing and display software, and by the end of 1986 foundations for the operation of an 'in-house' videotex system had been put into place. It is envisaged that during 1987, as more information is added to the videotex database, the service will be made public.

Some activity continued in the area of in-service education relating to the use of computers and technology. In August, an all-day workshop at the Frankston campus was held for members of staff of the School of Education on the theme of 'Personal Computing'.

Other Chisholm In-Service Education (CHISE) activities were conducted by EDU personnel and by contracting staff from the Faculty of Technology and the School of Education. Overall, 135 staff members participated in the various courses and workshops.

The Evaluation program, consisting of Subject Evaluation and Teacher Evaluation Questionnaires, continued to be used extensively by staff of the Institute. A total number of 727 evaluations were requested throughout the year.

Media Services Section — The Media Services Section acquired a Portable Video Cassette Recorder and two Edit Video Cassette Recorders during the year. These machines are 'high band' broadcast standard U-matic and will dramatically increase the picture quality of videotapes produced by the Section.

Despite the review process, the Section experienced a most productive year and a number of varied and stimulating projects were undertaken.

A video training tape on occupational health and safety was produced for Dulux Australia Ltd. and featured Mr Doug Curlewis, a former lecturer in the David Syme Business School.

A documentary entitled 'The Sky's the Limit' was produced for the Victorian Council on the Ageing and was funded by the Department of Sport and Recreation. It dealt with the subject of recreational activities for the aging in institutionalised care.

A publicity videotape was produced for AMIRA, the Australian Mineral Industries Research Association Limited and was named 'AMIRA — Interface for Industry'.

An eight-projector audio visual program, 'Meeting the Challenge of Change', was made for the official opening of the Centre for Business Technology and was later reprogrammed and recorded onto videotape for Shell Australia Ltd., co-founders of the Centre.

The Library

The Library continued to thrive as a centre for information provision and information networking. The Institute defended its Library against dangers posed by the devaluation of the Australian dollar and a sharp increase in the cost of casual staffing, owing to a new salary award. Thanks to the flexible, consultative budgeting process now used in the Institute, imaginative planning and tight financial control in the Library, and the excellent efforts of Library staff, 1986 was a year of success rather than a year of decline. The electronic doorcount of users exiting from the two campus libraries sums up the level of activity from 597,954 in 1985 to 709,536 in 1986.

Some of the achievements of the Library in 1986 were:

- The SOUTHGUIDE information networking project with other information providers in the areas south-east of Melbourne, initiated by Chisholm Library in 1985, continued to develop.
- The Frankston Databank project (historical
and current information in two separate databases) was set up in conjunction with the City of Frankston and the Community Employment Program.

- Dr Pierre Gorman, CBE, Visiting Fellow attached to Chisholm Library, made substantial progress on a bibliography of references to disability in Commonwealth Government publications.
- A carefully researched formula was introduced for the allocation of Library acquisition funds among School and Faculty and School subject areas.
- There was sustained involvement of Library staff on Institute committees concerned with academic programs, staffing policy, and physical resources, resulting in the close alignment of Library to Institute priorities.
- The foundation was laid of Library support for the new Nursing studies program at the Frankston campus.
- After a short suspension, Sunday opening was restored despite the budgetary impact of a new casual staff award, thanks to the efforts of ASAC, the Student Union, Schools and the Faculty to help the library obtain supplementary funding.
- Lending by the Library grew from 251,762 items in 1985, to 278,840 items in 1986.

- There were 53,656 enquiries handled by the reference and enquiry service points.
- Chisholm continued as a net lender in the Inter-Library Loan network, with 2,788 items lent against 1,478 items borrowed.
- The User Committee, under its foundation chairperson, Kate Blundell, and the Suggestions Box system provided valuable student input to the Library’s work.
- Improved policies and practices were developed to serve disabled library users.
- The Library Advisory Committee continued to refine and monitor the relationship between Institute and Library policy.
- The Library’s internal committee system functioned smoothly, providing for broad-based staff contributions to the development of Library policy.
- A high level of staff development activity was sustained including conference attendance. The Library’s annual Corporate Planning Day again served both staff development and planning objectives. Some staff undertook consultancies, research and lecturing.
- There was continued progress in re-designing jobs, and diversifying tasks within some jobs (‘matrixing’), in order to enhance the versatility and motivation of staff, and to

Notes:
Buildings and Grounds — activities such as stores, maintenance and cleaning, etc.
Computer Centre—staff who manage and operate the computing systems and provide programming support.
Business Undertakings — activities such as cafeterias, staff club, housing schemes, research companies, and student residences controlled by Chisholm.
Student Services — activities such as counselling, careers, health and housing services.
achieve more efficient staff deployment.

- Some success was achieved in supplementing the Library's regular funding by means of extraneous grants and earnings. Of the Library's total expenditure on equipment, 34 per cent was covered by extraneous funding.
- Applications of new information technology included replacement of the printed version of Chemical Abstracts with on-line access; free user access to AAP's Corporate Report business and political information service; provision of user-access Apple Macintosh computers on both campuses; monitoring of CD-ROM developments; and finalisation of plans for 20-station IBM-compatible microcomputer laboratories in each campus library (in collaboration with the David Syme Business School and the Faculty of Technology).
- The Library's Reader Education activities continued strongly, and the CITSEARCH on-line searching remained a cornerstone of the Library's information services work.
- The Library's internal systems planning (eg, for management information and serials control) proceeded well. The Library's ALIS computerised system (for loans, cataloguing and public catalogue access) continued to function smoothly, with a new release of software and improved arrangements for software support.
- The Library received excellent co-operation from other Chisholm Departments, and a particularly close relationship was maintained with the Computer Centre. Chisholm also benefitted through co-operation of its Library with other academic libraries through CAVAL Ltd., and ALCAE (Vic.) - the Association of Librarians of Colleges of Advanced Education - Victoria. A notable advantage of CAVAL membership is the reciprocal borrowing scheme with other academic libraries (CAE and University) conducted by CAVAL.

Problems faced by the Library in 1986 included:

- Severe shortage of space on both campuses, but particularly Caulfield;
- Lower than desirable levels of acquisition (4,109 new monograph titles and 2,946 current serials);
- Inadequate equipment funding for replacement of obsolete or worn-out audiovisual, microform and other equipment; and
- A worrying level of repetitive strain injury among Caulfield Library staff (mitigated during the year by the Institute's strategies to help solve this problem).

While steadily increasing usage is pleasing, the Library and the Institute need to recognise the dangers of the so-called 'freeway effect', where a Library's very success in providing a service creates a demand which is too great to be adequately met without increased resources. The Library has taken some steps to adjust demand patterns
(eg, by revising its policy on lending to external borrowers) and to generate new resources (eg, by external grants and earnings). The delicate balancing of demand and resources will be in the Library's major challenge in the next few years.

### Non-Teaching Staff Full-time Equivalents

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical</td>
<td>17.48%</td>
</tr>
<tr>
<td>Student Service</td>
<td>15.51%</td>
</tr>
<tr>
<td>Library</td>
<td>13.49%</td>
</tr>
<tr>
<td>EDU</td>
<td>9.85%</td>
</tr>
<tr>
<td>Computer Centre</td>
<td>7.11%</td>
</tr>
<tr>
<td>Central Admin</td>
<td>6.72%</td>
</tr>
<tr>
<td>Bus Undertak's</td>
<td>3.13%</td>
</tr>
<tr>
<td>Building/Ground</td>
<td>2.95%</td>
</tr>
<tr>
<td>Ac Admin/Cler</td>
<td>23.78%</td>
</tr>
</tbody>
</table>
5. Research and Consultancy

Development Office

This was a year of change and some interim redirection in the activities of the Development Office. In January, direct management responsibility for the functioning of the Centre known as Chisholm Managed Services (CMS) was entrusted to the Development Director.

Following a review, the Institute directed that CMS be wound up. The activities of the former Centre were either transferred to other Chisholm administrative arrangements throughout the year or they were disposed of in an appropriate and expeditious manner. This task proved to be very time-consuming and in carrying it out the office had to shift the focus of its operations.

In the second half of the year all efforts were directed at placing the management of the Caulfield East shopping plaza on a proper commercial basis and in pursuing the debt financing necessary for the satisfactory completion of the Technology Tower/Student Union project. Both tasks were achieved in 1986 and it is expected that the Chisholm community will enjoy the benefits of this exciting new facility in the second half of 1987.

In August, Dr W.R.S. Briggs, the initial appointment of Development Director, resigned to take the position of Chief Executive Officer with SIROTECH Ltd. The contribution made by Bill is perhaps best reflected in the reports of the activities of the individual centres which follow. His commitment to their success and his role in nurturing their development will be long remembered. In November, Mr Peter Cunliffe accepted a three year appointment to the position of Development Manager.

Development Centres

Centre for Applied Mathematical Modelling

In 1986 the Centre for Applied Mathematical Modelling continued to show consistent growth in applied research and development with a number of new long term projects which built upon an existing strong base of continuing projects. A rapid growth in short term consulting activities was also evident, particularly in the area of regulatory air quality modelling.

Highlights for 1986 included:

- The total income from CAMM activities since its inception exceeding $1 million.
- The successful application for a third NERDDC grant, bringing the current NERDDC funding to approximately $160,000.
- Continuing overseas support for CAMM’s air quality modelling activities as exemplified by a new research contract with Air Resource Specialists Inc., Colorado, USA.
- Further consolidation of CAMM as a major consultant in Victoria in regulatory air quality modelling as part of Schedule E of the State Environment Protection Policy (The Air Environment).
- Research programs undertaken by visitors from overseas: Ms Li Luqiong (Kunming Institute of Technology, People’s Republic of China); Dr M. Fosberg (US Forest Service, USDA); and Professor W. Marlatt (Colorado State University, USA).
- The strengthening of co-operative links with various US research organisations following successful visits by Dr I. Smith (ARS Research Contract) and Dr P. Grossman (PEP Program).

During 1986, 24 consultancy projects were undertaken by CAMM.

Centre for Business Technology

During the year, a full-time Executive Director, Mr Tom Kopp, was appointed and the Centre held its official opening in October.

An Advisory Board of representatives from industry, government and the Institute was appointed by the Council to advise the Director on policies, strategies and programs to be undertaken by the Centre. Mr S. M. G. Hodge of the Shell Company of Australia, was elected as its first Chairman.
An Executive Program of eight new short courses was developed and was successfully launched in the last two months of the year. The Centre also commenced a consulting program to industry, with encouraging initial results being achieved.

A pilot office automation system continued in operation during the year, serving users within the Directorate, the Faculty of Technology and the David Syme Business School.

A well-equipped office automation laboratory was in use throughout the year by students undertaking the Graduate Diploma in Business Technology as well as other courses.

Centre for Industrial Tribology
The Centre for Industrial Tribology is a joint venture between the various Divisions within the Faculty of Technology. As such, it is one of the few inter-disciplinary Centres within the Institute which has functioned successfully for the last five years. The Centre is presently attached to the Division of Engineering and Industrial Technology and managed by Nick Di Toro from the Department of Mechanical and Industrial Engineering. The Centre is mainly concerned with external consultancies and seminars or workshops.

During 1986 the following seminars were organised:

- Selection and Maintenance of Rolling Element Bearings (six evenings from 7 October to 11 December);
- Bearings and Pumps (4 December).

A number of consultancies were undertaken during 1986. The major projects are listed below:

- Friction in Bearings (continued from 1985) by N. Di Toro;
- SEC Project 1 — Dredger Lubrication System by N. Di Toro, L. Evans and B. Barnard;
- SEC Project 2 — Guidelines on Lubrication Selection by L. Evans;
- SEC Project 3 — Lubricant Specifications in Tender Documents by L. Evans;
- Stainless Products — Deep Drawing of Stainless Sinks by L. Evans;
- Boss Components — Performance of Automatic Transmission Filters by N. Di Toro and W. Wiles;
- Streets Ice Cream — Wear in Ice Cream Blending Equipment by N. Di Toro and D. Phelan;
- John Lysaght — Wear in Rolling Mill Couplings by L. Evans and M. Thit;
- Oilmin P/L — Feasibility Study for Oil Reclamation (in progress) by L. Evans and N. Di Toro.

In addition N. Di Toro and J. Burt presented papers at the Bearings and Pump Seminar held at Chisholm in December 1986. Two staff members associated with the Centre (Ray Pugh and Dr E. Hemingway) were elected to the five man National Tribology Panel established by the Institution of Engineers, Australia and the ASLE.

Centre for Robotics
During 1986, the Centre was involved with short courses concerning the introduction to robotics and MAP, as well as consulting to industry on a variety of matters.

Income for this period was $18,880 for short courses and $10,000 for consultancy.

The Centre has provided speakers to meetings of professional bodies, government departments and educational institutions.

During 1986, the Centre, in conjunction with AEAC Ltd. of Wollongong, produced further issues of its newsletter Robotics Now. This newsletter is currently being circulated to over 1,000 readers both interstate and overseas.

Chisholm Institute of Technology Engineering Research and Advisory Centre
CITERAC was established in 1981 as an umbrella for all extraneous activity within the Division of Engineering and Industrial Technology which was of a diverse nature and carried out on a scale of insufficient size to justify a specialist Centre. This includes all DEIT extraneous activity except that carried out within the Industrial Tribology Centre.

In 1986 the following projects were carried out:

- Recognition of the Structures Laboratory by the National Association of Testing Authorities (NATA);
- Development and testing of designs for guyed masts for telecommunications;
• Continuing development of condition monitoring systems for high voltage switch gear;
• Provision of expert witness services; and
• Miscellaneous testing and product Research and Development Services.

Income to the Centre was $83,000.

International Business Centre
The International Business Centre received a $30,000 seedling grant from the Department of Industry, Technology and Resources. In addition, a Joint Venturing Overseas Seminar was held in conjunction with the Centre for the Development of Entrepreneurs which attracted 60 participants.

A feasibility study was conducted for the Department of Management and Budget to evaluate a proposed export market familiarisation scheme. As a consequence, the State Government agreed to fund this major project which will be managed by the International Business Centre.

The Pearcey Centre for Computing
During 1986, the Pearcey Centre generated funds in excess of $400,000 through educational and consultancy services.

Attendances at evening short courses were 932, with a record-breaking 527 in second semester. To date, 317 attendees have undertaken assessment associated with the Certificate of Computing, introduced in 1985. The Centre commenced short courses on the Frankston campus, duplicating the Division of Information Technology’s micro-computer resources.

Twenty-four company courses were conducted during the year. These courses were usually of five days duration using the Centre facilities, but at other times were presented in-house and interstate.

Two significant course developments were undertaken for major banking groups.

The Centre has commenced joint marketing of its front-line courses in South-East Asia.

A major seminar was conducted mid-year in conjunction with the Division of Information Technology’s Database Special Interest Group and the Australian Computer Society (Victorian Branch).

Twelve consultancy projects were conducted, ranging from firms requiring handholding assistance to large corporations requiring detailed professional advice. Numerous small calls for assistance were handled by phone at no charge.

The concentration on Applied Research continues to be in the area of Expert Systems and Knowledge Engineering.

Polymer Research Centre
The Centre continued research activities in PVC degradation and mechanisms of free radical chain transfer processes. The degradation work was reported at the 15th Australian Polymer Symposium and results of computer simulation studies relating to both areas was described at an Australian Polymer Discussion Group meeting in Canberra.

The Centre obtained an ARGS grant for the study of degradation of PVC model compounds ($3,000), and this study will continue with increased funding ($6,000) in 1987.

Mr Chynoweth, Mr Boughdady, and Dr Hewitt of the Polymer Research Centre, all presented papers at national symposia. A paper on the synthesis of some PVC model compounds was accepted for publication during 1987 in the Australian Journal of Chemistry.

Consulting activity during the year included advice to BOS Components Pty. Ltd. on oil filters, to BHP on self-lubricating plastic washers, to NSK Bearings on oil seal failure, to the Sugar Research Institute in the nature of some high performance bearing material and to Allflex International (NZ) on the properties of animal ear tags.

Mr Chynoweth continued his heavy research commitment in the properties of polymer blends. This will soon be presented for the award of PhD at Monash University.

Timber Engineering Technology Centre
The Centre was established in April 1985 under a Timber Promotion Council grant as an adjunct to the Department of Civil Engineering. It has the role of promoting, where a cost-benefit can be demonstrated, the construction of engineered timber structures, eg, warehouses, fac-
tories and other industrial, commercial and recreational buildings.

In 1986 a number of activities were undertaken:

- Lectures to Chisholm, Monash and Swinburne civil engineering students;
- Two sponsored public lectures involving CTETC, interstate and overseas speakers;
- Development of a low cost proof grading machine;
- A wide range of product testing and research and development; and
- Development of proposals to establish a Quality Assurance Laboratory for the timber industry.

Income to the Centre was $85,000. In November 1986 the Executive Engineer, Dan Jepsen resigned to move interstate.

Water Studies Centre

The Centre continued to grow during 1986, undertaking a range of research and consultancy activities. The total income for the year was in excess of $200,000.

The Water Studies Centre is very closely associated with the Department of Chemistry and Biology within the Faculty of Technology. Most of the expertise is contributed by academic staff members from the Department of Chemistry and Biology although academic staff from other Departments, other Schools within Chisholm and from other CAE’s and Universities have been involved in particular projects. Dr B.T. Hart is jointly Director of the Water Studies Centre and Head of the Department of Chemistry and Biology.

An agreement set up in 1985 with AnalSpec Pty Ltd to provide two modern atomic spectroscopic instruments—a Perkin Elmer Inductively Coupled Plasma Emission Spectrometer and a Perkin Elmer Zeeman Atomic Absorption Spectrophotometer – in the Centre’s laboratory for teaching and research, continued to work well during 1986. Without such mutually advantageous arrangements it is difficult to see how the Centre could obtain access to such modern and expensive instruments (the above two instruments would cost in excess of $300,000).

In June 1986, Dr Hart and Dr Tavisakdi Ramingwong, Dean of the Faculty of Science, Chiang Mai University, signed an agreement for academic exchange between the two organisations. Under this agreement both parties will promote the following – joint research; exchange of information; exchange of researchers; and exchange of graduate students. It is expected that a similar academic exchange agreement will be signed with the Department of Chemistry, University of Philippines during 1987.

The Schools and the Faculty

School of Art and Design

Department of Ceramics — The Pilchuck Summer School in Glass in Seattle, USA, was the destination of a third year Ceramic Design student for the second year in succession. In 1986 the prestigious scholarship was awarded to Felicity Larkin.

The scholarship is awarded annually to two top Australian glass students by the Crafts Board of the Australian Council. The scholarship provides for tuition fees, accommodation and travel for two sessions with world renowned artists.

Maureen Williams, a 1986 graduate of the BA (Ceramic Design) has won a place as a teaching assistant of the 1987 summer school and John Greig, a part-time tutor with the department, has also been accepted as a teaching assistant.

Walker Ceramic Award—Maria Froia, a 1986 graduate of the BA (Ceramic Design) was highly commended for a range of saggar fired forms.

Kim Elliott, a second year student in the Department of Ceramic Design, was the 1986 recipient of the annual Kamel Kiln Award. This $500 award is open to students from all tertiary ceramic courses in Victoria.

A number of professional commissions were undertaken by students of the Ceramic Design Department during 1986. These included:

- David Syme Business School commissioned a final year student, Michelle Herriot to design a Commemorative Panel signifying the 25th Year of Accounting.
- Monier Ltd. commissioned a Graduate Diploma student, Leanne Tregear and a final
year Ceramic student, Mark Douglass to design and complete a range of 80 safety awards in glass and marble.

- Trophies for the International A’ Class Cata-
maran Association were designed and completed by Leanne Tregear, Mark Douglass and Kathy Rindt.

- A third year BA (Ceramic Design) student, Amanda Mitchell was commissioned by Australian Portland Cement Ltd., to design a boardroom table, reception desk and planters in white polished concrete with brass fittings and inlays.

- A large laminated cold glass bay window consisting of three panels, was commissioned by a private client and successfully completed under close staff supervision during the summer vacation. Four final year students from the BA (Ceramic Design) and the BA (Fine Art)(Craft) course gained invaluable professional experience as a result of this project.

David Syne Business School

Ian Stagg, in conjunction with Dr Denis Kiellup and the Centre for the Development of Entrepreneurs, received a grant of $40,000 to run a pilot program of Graduate Enterprise, designed to encourage graduates to start their own businesses.

The School received a grant of $17,560 from the Department of Employment and Industrial Relations for a research project entitled ‘The Training Needs of Middle Managers and Supervisors for Employee Participation Productivity Improvement and Safety Programs in Metals and Engineering Firms in the Private Section.’

Dr June Gleeson received funding from the Metal Trades Industry Association (MTIA) for her research into the examination of the training needs of middle level managers and supervisors.

John Rice worked with Coopers & Lybrand within the Business Services Division specialising in model building and systems installation. Lilli Allgood worked in the Business Services Division of KMG Hungerfords and had a specific interest in the preparation of consolidated financial statements.

School of Education

Bob Greaves, Lecturer, further developed his ‘Children Working with Wood’ program. His stand at the Royal Melbourne Show was highly successful and popular with all the children who participated. The Royal Show Society has extended an invitation to Bob to participate once again in 1987.

A writer’s workshop for children was held during the May school vacation. The resulting publication, Mosaic, was presented to participants at a book launching organised by the School.

Staff continued their involvement with school communities through in-service programs in the areas of language education, social studies, art education, computer education and curriculum.

John Griffiths, Lecturer, taught English Language and Composition and Method of Teaching English as a Second Language, at Beijing Union University, Normal College of Foreign Languages, from September to December 1986, thus continuing the teaching link established by Charles Meyer, Lecturer, in 1985.

Brian Murphy, Lecturer, spent time in Arnhem Land on Professional Experience Leave. He was involved in developing language education programs at the Maningrida Primary School, a bilingual school for Aborigines.

School of Social and Behavioural Studies

The School continued its active role in social research and undertook consultancy projects with major government departments and instrumentalities.

Mr J. Ross, Senior Lecturer in Applied Sociology, undertook an evaluation of the ‘Helpmates Demonstration Unit’ for the Commonwealth Government. The research provided an assessment of the potential of community programs as an alternative to sheltered workshops for mildly intellectually disabled young adults.

Dr B. Wearne, Lecturer in Politics, had his PhD conferred by Sydney University. The title of his thesis was ‘The Theory and Scholarship of Talcott Parsons to 1951’. He also co-convened an interschool/faculty work group, ‘Clover-Leaf’
which investigates philosophical issues in education.

Dr B. Coram, Lecturer in Politics, had his PhD conferred by Sydney University. His thesis was entitled ‘Social Theory and Capitalism: On the Minimal Conditions Required for Capitalist Society to Exist in its Simplest Form.’

The Committee for Information and Research on Disasters and Natural Hazards (CIRDNH) was reconstituted as a committee late in 1985 and reports three times a year to the School Board. The clearing house function of CIRDNH has continued, with enquiries being received from interstate and overseas.

During 1986 CIRDNH produced an Occasional Report entitled ‘Credibility of Disaster Research,’ based on an address to the August 1985 ANZAAS Conference by Mr I. Murray, CIRDNH Co-ordinator. He has lectured at the Australian Counter Disaster College at Macedon and has continued researching attitudes and beliefs about disaster mythology.

While on PEP leave, Dr D. Woodward, Lecturer in Politics, undertook research on China’s rural policies at the University of London and at Oxford University.

Mr D. Kerr, Lecturer in Literature, pursued research in Australian Aboriginal Literature.

Dr B. McFarlane, Principal Lecturer in Literature, completed a PhD thesis on the adaptation of novel into film at the University of East Anglia, Norwich, UK.

A major report on occupational stress was provided to the Government Aircraft Factory. Four senior staff members led by Mr C. Cameron from the Applied Psychology Department participated in the study.

Mrs C. Ffrench, Senior Tutor in Applied Psychology, received the degree of MSc from the University of Melbourne. Her research focused on the phenomenon of imagery in depressive states.

Two Master of Arts candidates completed programs by research in Applied Psychology.

Faculty of Technology

Division of Digital Technology — Staff members Mr David Rowe, undertook a UNIDO consulting assignment in the People’s Republic of China. He spent six weeks at the Chengdu Institute of Radio Engineering, Sichuan Province, consulting and delivering short courses in communications and microcomputing.

The Applied Physics Department had its first PhD candidate. Andrew Cramond is conducting research on impulsive noise propagation as the basis of a thesis to be submitted to Salford University, UK.

Experimental work in this project is continuing in two major areas: the effect of moisture on ground impedance, and impulse propagation studies at the ground/air interface. An average of two days per week have been spent obtaining the measurements. Theoretical investigations to explain the results are also being undertaken.

Research and consultancy projects included:

- C.G. Don and I. Pappadopoulos (MSc Candidate) – Fences as a Barrier to Impulsive Noise.
- C.G. Swenson, T. Rogers (MSc Candidate) – Refractive Index of Opaque Liquids.
- C.F. Osborne, I. Svalbe, S. Vandenberg (MSc Candidate) – Texture Quantification.
- C.F. Osborne, I. Svalbe, G. Soosalu (MSc Candidate) – Pattern Recognition and Bolt Inspection.
- C.F. Osborne, Dr K. Thomson (Royal Melbourne Hospital) – an Image Processing Based Tutor for the Training of Radiologists.
- C.F. Osborne, I. Svalbe, M. Morgan, I. McKenzie (MSc Candidate) – Security and Image Processing.
- C.F. Osborne, I. Svalbe, T. Holmes (MSc Candidate) – Intelligent Interpretation of Line Drawings.
- C.F. Osborne, S. Vandenberg – Characterisation of Transmission Images of Thin Amorphous Solids Using Fractional Dimensionality.
- C.F. Osborne, T. Price (Department of Agriculture, Latrobe University) – Image Processing and the Quantitative Estimation of Disease in Foliage.
- C.F. Osborne, I. Svalbe, A. Rowsell (MSc
Candidate) – Sperm Morphology Classification and Wood Structure Classification.

  \textit{Division of Engineering and Industrial Technology}


- T. Ho – Chisholm Technology Tower Engineering; Surveying and Planned South Channel Fort Historic Survey.

- I. Little – Machining of Flywheels, Repco; Robot Components, Centre for Robotics.

- H.R. Milner – Design and testing of guayed telecommunications masts; Investigation of manufacturing defects in flush panel doors; Determination of the properties of laminated veneer lumber; Development of design methods for braced timber beams; Development of structural geology graphics software; Development of timber engineering software.


- G.W. Smith – Continuing research and development for Pryda (Aust.); Development of Stress Grading System for Victorian Hardwoods.


- W. Wiles – Anemometer Calibration, Dobbe Instruments; Investigation of Explosion, Blind Beggars Inn.

- B. Barnard, N. Di Toro – Dredger Centralised Lubricating System Redesign, SECV.


- D. Kennedy, K. Sietsema, B. Jenney – Plant wide productivity studies at Ford Motor Co. of Australia; TQC program for Matrix Design Pty. Ltd.

\textit{Division of Mathematical and Environmental Sciences}


- L.H. Evans – Performance analysis and selection criteria for greases in critical applications at Loy Yang Open Cut Coal Mine’, SECV.


- L.H. Evans – ‘Selection criteria and decision guidelines for lubricants to be supplied to the State Electricity Commission of Victoria by contract’, Report to the Prediction Services Department, SECV, November.


- P.B. Lochert and A.L. McLean – Study of child care centre needs at Queen Victoria Medical Centre, Clayton, November.

- G.S. Lorimer – Development of a new particle method for simulating air pollution, Report to SECV (Herman Research Laboratories), July.

- G.S. Lorimer – Validation of air pollution dispersion models, Progress report to Department of Resources and Energy (NERDCC Project No. 884), December.


- D.G. Ross – Air emission analysis, Pigment Manufacturers of Australia Ltd. Report to ICI (Engineering) Pty. Ltd, April.

- D.G. Ross – Odour calculations, Seymour
Dyeworks Report to East Melbourne Laboratories Pty. Ltd., May.

- D.G. Ross – Modelling emissions to air, AGM Spotswood Report to AWN (Air Water Noise) Consultants, July.
- D.G. Ross and G.S. Lorimer – Predicted ground level concentrations from basement car park emissions. Report to Vaughan Constructions, August.
- D.G. Ross – Plume dispersion calculations, Rohm and Haas Australia Pty. Ltd., September.
6. Interaction

Community Interaction

School of Art and Design
Successful workshop/seminars were conducted by Ms Jane Mansfield, Editor of Pottery in Australia, Bryan Trueman and Alistair Whyte. A two day information exchange took place between staff and students of Bendigo College of Advanced Education.

The Ceramic Production Studio has been tenanted since September 1985 and is providing facilities and equipment at a modest weekly rent for graduates and outside potters. The studio has attracted interest and prestige for the Institute from outside bodies.

The Clay Workshop has continued to produce high quality processed stoneware and handbuilding clay bodies. The clay is used by students on both campuses and is now purchased by local TAFE colleges, high schools and primary schools.

David Syme Business School
The School's well supported program in specialised short courses for executives attracted more than 1,000 participants to a range of over 50 workshops, besides the many in-house consultancy and training programs.

A major activity for 1986 was the establishment of the International Business Executive of the Year Award. The award, named in honour of the late Sir Phillip Lynch, was presented to Mr John Gough, OBE, Managing Director, Pacific Dunlop Limited. Mr Gough also presented the Inaugural Sir Phillip Lynch Lecture 'Australia's International Business Prospects' to an invited audience at the ANZ pavilion.

The Department of Accounting commissioned Michele Heriot of Art and Design to prepare a stained glass plaque commemorating 25 years of accounting education at Chisholm. It will be inserted in the window at the entrance to the fourth level.

The Department of Banking and Finance initiated public seminars and educational non-award programs in conjunction with the Australian Institute of Banking, and initiated the launch of the highly successful 'Women in Banking and Finance' public seminars in the last 12 months.

The Department of Management continued to extend its executive development programs with courses in communications, strategic planning and negotiation skills and the very successful Management Skills for Women course entered its 11th year.

On the Frankston campus the School increased its official involvement in local community initiatives, including the Westernport Development Council, the Westernport Information Technology Centre, and the Employment Initiatives Group. A Business Forums series with a range of speakers from business and government was also conducted.

School of Education
During 1986, Margo Guest introduced a crime prevention program to schools on the Mornington Peninsula and also assisted in training teachers in the Australian Capital Territory. Eighty-five per cent of the Peninsula schools now have one or more teachers trained in protective behaviours which is designed to prevent child maltreatment and domestic violence.

The Division of Continuing Education was instrumental in establishing the University of the Third Age and 200 delegates attended the Second National Conference held on the Frankston campus. The principal speaker at the conference was author, Myra Roper.

Programs held during the year included a Hospice Seminar addressed by Dr Mary Baines, the Chisholm Endeavour Program which was fully funded for the first time, and an AIDS Seminar held in conjunction with the Health Department.

A tutorial service for school children was instituted in 1986 in which the Division of Continuing Education acted as a 'matching' service allocating the appropriate student tutors to children in need.
School of Social and Behavioural Studies
Staff continued a strong interaction with other colleges, universities and other public bodies.

Dr B. Weare, Lecturer in Applied Sociology, was a consultant and member of the Board of Management for the Vietnamese Community Association Welfare Worker Employment Program. He was also a consultant and area organiser for the Anglican Diocese of Melbourne consultancy in Community and Welfare.

Mr D. Muschamp, Senior Lecturer in Politics, was a member of Advisory Committee of the Monash Centre for Bioethics.

Mr A. O’Grady, Chairman of Humanities Department, was a member of the Accreditation Board for reaccreditation for BA courses at Bendigo and Gippsland Colleges of Advanced Education, and gave a series of six lectures on Chinese Politics for the East Asian Studies Department, University of Melbourne.

Dr T. Keulemans, Principal Lecturer in Communication Studies, was Chairman of an Accreditation Committee (CIACAE) for Graduate Diploma and Master’s Programs in Public Communication at Canberra CAE.

Mr R. Smith, Senior Lecturer in Police Studies, was appointed to a Course Accreditation Panel, Darwin Institute of Technology and to a Course Advisory Committee, Associate Diploma in Security Management, Phillip Institute of Technology. He was also instrumental in the establishment of the Association of Criminal Justice Educators which had its inaugural meeting at Phillip in August.

Dr B. Costar, Senior Lecturer in Politics, was an examiner in HSC Politics and also lectured in training courses for the Department of Labour.

Head of the Welfare Section, Mr G. Clarke, acted as a training consultant for the Staff Training College of the Office of Corrections.

Mr D. Kerr, Lecturer in Literature, was involved in school liaison visits in the Mornington Peninsula region. Out of these activities have arisen for a conference for secondary school teachers, to be held at the Frankston Campus in 1987.

Dr B. McFarlane, Principal Lecturer in Literature, acted as consultant to the HSC Literature Books Committee. He was also editorial consultant to Cinema Papers.

Ms G. Barnett, Lecturer in Literature, was a member of the Accreditation Committee for the Graduate Diploma in Children’s Literature at Victoria College.

Consulting activities were undertaken by the Applied Psychology Department on behalf of the Victorian Public Service Board, the Victorian Department of Community Services, and a number of private sector clients.

A program of treatment for dental phobia was offered free of charge to members of the Chisholm community. The program treated over 40 persons with dental phobia of varying intensity.

Faculty of Technology
Dr C. Don of the Division of Digital Technology was invited to act as a consultant to the Acoustics Department of Salford University, UK, on their investigation into blastwave propagation. This involved him in spending four weeks at Salford.

Dr J. Davis received travel grants from two organisations. He was awarded a 1986 Gottstein Fellow, one of two Gottstein Fellowships for 1986, by the J.W. Gottstein Memorial Trust Fund to study the potential applications of computerised tomography techniques to the Australian Forest and Forest Products Industries. The study involved a six week tour of computerised tomography facilities and forest products research centres in Japan, Europe and North America. He was also awarded an Institute of Wood Science (Australian Branch) Travelling Grant to study overseas activities in the application of computerised tomography and densitometry techniques in wood science.

The Applied Physics Department had visits of groups from a Chinese Government Delegation, Korean Institute of Technology, Dindema Australia Ltd., ACI and D.W. Williams Biotechnology.

Conferences
David Syme Business School
Darrell Mahoney, Ken Greenhill and Laurie Webb of the Department of Accounting attended the Australian Society of Accountants
First Information Technology forum on 'Mastering Change' in Singapore.

Staff attended the Accounting Association of Australia and New Zealand (AAANZ) Annual Meeting in Adelaide.

Several staff attended the Confederation of Asian and Pacific Accountants (CAPA) annual conference in Melbourne. The theme was ‘Accountancy’s Image – Challenge and Change’.

School of Education
Tom Hill, Lecturer, presented a paper titled ‘Problem Solving and Existing Curricula’ at the 1986 Conference of the Mathematics Association of Victoria.

School of Social and Behavioural Studies
A number of staff were involved in preparing papers for Australian and overseas conferences during the year.

Dr N. Knight, Chairperson of the Applied Sociology Department, presented a paper at the Sociological Association of Australia and New Zealand Conference at the University of New England, Armidale in July. The title of his paper was ‘Leadership in Youth Club Crises’.

Dr B. Wearn, Lecturer in Applied Sociology, was a workshop leader at the 50th anniversary conference of the Vereniging voor Calvinistische Wijsbegeerte, Zeist, The Netherlands in August – to be published in conference proceedings, ‘Man the Actor in 20th Century American Sociology’. He also gave a guest lecture, ‘Symbols and Society’ in May.

Dr B. Ėoram, Politics Lecturer, delivered the following papers in 1986 — ‘The Thin Theory’, APSA Conference, Brisbane in August; ‘Rational Choice Theory’, University of Sydney in October; and ‘Rational Choice Theory’ and ‘The Thin Theory and the Tough Test’, both at University of Tasmania in October.

Mr D. Muschamp, Senior Lecturer in Politics, presented a paper entitled ‘Moral Arguments and Medicine’ for the Monash Centre for Bioethics residential conference for health workers.

Mr A. O’Grady, Chairman of the Humanities Department, gave a paper entitled ‘The Imprisonment of Western Missionaries in China in the 1950’s’ at the University of Tasmania in July.

Staff and students were involved in the Study Group ‘Police in Australian Society’ at the seminar on ‘The Police Family’ held at Chisholm, Caulfield Campus in May.

Assistant Commissioner R.C. Knight (Victoria Police) was Guest Speaker at the inaugural Annual Dinner for past students of Police Studies in April, and spoke on ‘The Future of Police Training’.

The Police Studies Section organised a joint extension lecture in August with Swinburne Institute of Technology on ‘Crimes Against Children’. Speakers were R. Costigan, QC, Detective Inspector Neil Comrie and Sergeant Toby Tyler from the USA.

Peter Macris, Lecturer in the Department of Applied Psychology, attended the Annual Conference of the Australian Psychological Society. A number of staff attended the Victorian Branch Conference of the Society. Barry Evans, Lecturer in the Department, chaired a session at the Canberra Conference on Communication in Medicine, and contributed a paper.

While on PEP leave, Mr D. Kerr, Lecturer in Literature, attended creative writing workshops at the University of Harvard and Boston and at the Massachusetts Institute of Technology.

Faculty of Technology
The Division of Digital Technology, in conjunction with the Centre for Robotics, held a short course on MAP (Manufacturing Automation Protocol). This is believed to be the first MAP course offered in Australia.

The Computer Imaging Group in the Applied Physics Department organised and funded 25 seminars on Physics and Computer Imaging topics which were attended by Chisholm staff from different departments and visitors from Monash, RMIT, Swinburne, industry and government departments. External speakers including Professor Ray Jarvis (Electrical Engineering Department, Monash University), and Dr K. Thomson (Radiology Department, Royal Melbourne Hospital). The average number of attendees was 30, with a maximum of 50 at the colloquia on ‘Impulse Propagation over Grassland’ given by Mr A. Cramond.

The Department of Applied Physics with the
Mechanical Engineering Department organised a one day seminar on 'Lubrication and Pumps' that attracted 75 attendees from industry.

Staff also presented several other seminar and conference papers:

- J. Liubinas, G. Swenson and L. Carney, The Disinfection of Contact Lenses, Southern Regional Congress of the Australian Optimetrical Association (Victorian Division), October.
- C.G. Don, Impulsive Acoustic Noise, Open University, UK, July.
- P. Wells, Computerised Tomography and Non-Destructive Testing, Australian Institute of Non-Destructive Testing, November.
- C.F. Osborne, Image Processing Applied to Surface Characterisation, ASLE Technical Meeting, Melbourne, June.
- A. Roswell and C. Osborne, Image Analysis Applied to Spermatozoa Classification, Royal Womens Hospital, May.
- J.R. Davis, Computer Imaging and Chemistry, presented to the Royal Australian Chemistry Institute, Chemical Education Group, March.
- J.R. Davis, X-rays and Computer Imaging, presented to the Australian X-ray Analytical Association, Chisholm Institute of Technology, June.
- J.R. Davis, Industrial Computerised Tomography in Australia, presented to the Central Research Institute for Electric Power Industries, Tokyo, Japan, August.
- J.R. Davis, Aspects of Industrial Computerised Tomography, colloquium given to the Radiation Physics Group, Department of Physics, University of Surrey, Guildford, August.
- J.R. Davis, Industrial Computerised Tomography - A beginner's perspective. Colloquium presented to the Materials and Components Technology Division, Argonne National Laboratory, University of Chicago, Illinois, USA, December.

Staff from the Division of Engineering and Industrial Technology conducted the following short courses and seminars:

- Industrial Engineering for Professionals, D. Kennedy;
- Industrial Engineering Awareness Training Program, Ford Motor Company, D. Kennedy;
- Project Management with Computers, K. Sietsema;
- Hands-on Timber Engineering Design Workshop, Chisholm, H.R. Milner;
- Timber Structures - New Horizons, Hawthorn, H.R. Milner;
- Timber Design in Practice, Hawthorn, H.R. Milner;
- Microcomputers and Engineering Management, IE Aust (Vic), ACADS, RMIT, M.A. Muspratt;
- Hands-on Timber Engineering Design Workshop, Chisholm, G.W. Smith;
- Mr G. Barnard and Mr J. Burt provided lectures on Mechanical Design in the MESDOC course at HMAS Cerberus;
- Mr N. Di Toro as Director of the Tribology Centre organised a one-day seminar on Bearings and Pumps.

Two staff also presented papers at seminars at Chisholm during 1986. B.W. Barnard presented a paper on Plant Layout Evaluation.
Techniques' at the IIE Course on Industrial Engineering Techniques, July; and N. Di Toro presented 'Fitting of Bearings and Related Factors Affecting Bearing Life', at the Seminar on Bearings and Pumps, December.

Short courses conducted by the Division of Mathematical and Environmental Sciences included:
- P.B. Lochert and C.R. Stather, short course for staff on the features of the statistical package SPSS-X, funded by the Educational Development Unit, October.
- P.B. Lochert, an introduction to multi-variation techniques to Master students working in Imaging. Unfunded course, December.
- G. Coldicutt and G. Leary, a short course on Pascal programming for scientists and engineers of the Defence Support Department. Funded by the Pearcey Centre, July.
- G. Coldicutt, a short course on Pascal programming through the Pearcey Centre held each semester.
- A. McLean and G. Coldicutt, a short course to introduce staff to the program MARKS, developed for collection and analysis of student marks. Funded by the Educational Development Unit, February.

Conferences and Symposium papers delivered by staff included:
- B.T. Hart, Nutrient spiralling in streams, at a seminar on 'Streamside Vegetation - Requirements, Techniques and Limitations', Wangarra, March.
- B.T. Hart, The fate of trace metals and radionuclides from uranium mining operations in the Alligator Rivers region, Royal Society of Victoria, August.
- B.T. Hart, Stream quality to protect in-stream uses, at Specialist Workshop on 'In-stream Needs and Water Uses', Sydney, September.
- B.T. Hart, The fate of trace metals and radionuclides in Magela Creek system, Northern Australia, at US Geological Survey, Menlo Park and Denver, USA, November.
- D.G. Hewitt, Computer simulations of complex reaction kinetics, Polymer Discussion Group, Canberra.
- C. Duyvestyn, Counting a pre-service course in Nursing - a matter of compromise? Conference on Role of Biosciences in Health Science Education, Lincoln Institute, Melbourne, November.
- J. Bapat, Lecturing techniques: are we up to the mark? VPSEC Chemistry Conference, Bendigo, December.
- L.H. Evans, Data available for the solution of tribological problems, Australian Section of the American Society of Lubrication Engineers, Melbourne.

Exhibitions

Art and Design

In 1986, two years of planning and negotiation came to fruition for the Department of Ceramic Design with the opening of the historic exhibition 'Continuity and Change' at Nanjing College of Art in Jiangsu, China. The exhibition was accompanied by the Head of Department, Mr Lindsay Anderson, the Exhibitions Officer of the School of Art and Design, Sian Adnam, and a third year BA Ceramic Design student, Eugenie Jackson. A major part of the exhibition had been shown in the Westpac Gallery of the Victorian
Arts Centre in November 1985 prior to its departure to China.

On its return to Australia, the exhibition was shown at the Sydney Opera House in September 1986. For the Sydney exhibition a number of major pieces completed by staff and students of the Department during the year were included with the collection.

One outcome of the Department's link with China that proved very rewarding for both staff and students of the School of Art and Design was the three months spent in the department by Zhenhua Zhang, a well-known artist and lecturer of Fine Art at Nanjing College of Art. Zhenhua's mastery of the brush, his charm and generosity during his stay left a lasting impression on all who were associated with him. Zhenhua's work in Australia culminated in the presentation of an exhibition of 21 works in ink and Chinese colour on rice paper at the Westpac Gallery of the Victorian Arts Centre.

Visitors

Art and Design

In the first semester of 1986 the Department of Ceramic Design welcomed Professor Johannes Schreiter, an eminent stained glass artist from Frankfurt, West Germany as visiting fellow.

Professor Schreiter conducted an inspiring three week intensive workshop in glass design development. The workshop participants included a number of invited guests and students from among the top young glass designers in Australia who worked alongside our own BA (Ceramic Design) and BA (Fine Art)(Craft) students.

A number of large glass panels designed and developed as a result of the workshop were featured in the Department's major exhibition, 'Continuity and Change', when it was shown at the Sydney Opera House in September.

David Syme Business School

John Argenti visited the Department of Accounting as a Visiting Fellow following his keynote address at the Australian Society of Accountants Seminar in Singapore in April. John addressed seminars on both campuses and for the Australian Society of Accountants who provided most of the funding for the visit.

In October, the Department received funding from the Visiting Fellows Committee and Arthur Young to bring Professor Norton Bedford, the Arthur Young Distinguished Professor of Accounting from the University of Illinois to Chisholm for two weeks in April/May 1987.

Mr Neil Gilbert, ex-Philip Morris Corporation, USA was a Visiting Fellow of the Department of Marketing with particular interests in buyer behaviour and marketing research. Mr Julius Mukhwana was a visiting academic from the Polytechnic at Harare, Zimbabwe. His special areas of interest were market strategy and international marketing. The Visiting Retail Executive for 1986 was Mr Bob Bourke, Managing Director, Venture Stores.

School of Social and Behavioural Studies

Dr A. Kennedy from Morgan State University, Baltimore and Dr. I. Engleberg from Prince George's Community College, Largo, Maryland took one year appointments as Visiting Fellows in Communication Studies from 1 July 1986.

Faculty of Technology

Dr M. Fosberg from the US Forest Service (USDA) spent a six week period visiting CAMM during early 1986. The visit enabled Dr Fosberg to study CAMM's unique wind field modelling work, and was supported by a US Government Travel Grant.

Ms Li Lianqiong from Kunming Institute of Technology (People's Republic of China) arrived in early 1986 to work with CAMM for a two year period on aspects of air quality modelling. The visit was funded by ADAB and the People's Republic of China.

Professor W. Marlatt (Colorado State University) was a Visiting Fellow at Chisholm in 1986. The visit was funded jointly by CAMM and the Chisholm Visiting Fellow Program. Professor Marlatt's program included involvement in CAMM's wind field modelling work and in the development of a proposed Masters Degree in Environmental Quality Management (by course work).
Introduction
During 1986 Council requested an external consultant, Dr A. Hulls, to investigate and report on the financial management and associated administrative procedures of the Institute. As a result of this report the Finance Branch was completely restructured and a number of senior appointments made towards the end of the year. The appointments were designed to strengthen the level of financial expertise within the Institute's administration and facilitate the planning and development of financial management accounting reporting systems appropriate to the Institute's requirements for the next five years.

Income generated from sources other than recurrent teaching funds provided by the Commonwealth Tertiary Education Commission continued to increase. This income which amounted to $2.506 million in 1983 rose to $6.726 million in 1986, an increase of 168 per cent. The increase between 1985 $5.144 million and 1986 was 30.75 per cent. This source of revenue represented 16.9 per cent of total Institute income in 1986.

During 1986 the Finance Branch also played a significant role in arranging finance for the Technology Tower, a project costing approximately $15 million which will contribute additional non-re-current funds to the Institute from late in 1987.
### Statement of Assets and Liabilities as at 31 December 1986

<table>
<thead>
<tr>
<th>Notes</th>
<th>1986</th>
<th>1985</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>ACCUMULATED FUNDS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recurrent Grant Account</td>
<td>(650,593)</td>
<td>(319,792)</td>
</tr>
<tr>
<td>Equipment Grant Account</td>
<td>45,863</td>
<td>136,580</td>
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<tr>
<td>Minor Works Grant Account</td>
<td>3,576</td>
<td>—</td>
</tr>
<tr>
<td>Major Works Grant Account</td>
<td>(1,640)</td>
<td>(1,140)</td>
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<tr>
<td>Extraneous Account</td>
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<td>8,939,572</td>
</tr>
<tr>
<td><strong>Total Accumulated Funds</strong></td>
<td>9,184,906</td>
<td>8,655,220</td>
</tr>
</tbody>
</table>

Represented By:

| CURRENT ASSETS                      |            |            |
| Bank Accounts and Cash Balances     | 6          | 56,184     |            |
| Debtors and Prepayments            | 3          | 1,859,089  | 1,872,107  |
| Investments                        | 4          | 6,990,980  | 11,120,751 |
| Inventories                        | 2(xi)      | 153,291    | 223,130    |
| SEC Security Deposit               | 11         | 1,829      | —          |
| **9,061,375**                      |            | **13,215,988** |

| NON CURRENT ASSETS                 |            |            |
| Shares in Subsidiary               | 10         | 2          | —          |
| SEC Security Deposit               | 11         | 71,331     | —          |
| Investment Property                |            | 2,409,038  | 2,409,038  |
| Fixed Assets                       | 5          | 11,559,486 | 2,997,602  |
| **14,039,857**                     |            | **5,406,640** |

**Total Assets**                    | 23,101,230 | 18,622,628 |

**LESS CURRENT LIABILITIES**        |            |            |
| Bank Overdraft                     | 6          | —          | 1,537,897  |
| Commercial Borrowings              |            | 2,518,727  | —          |
| Creditors and Accruals             | 7          | 5,329,897  | 1,211,538  |
| Prepaid Tertiary Education Assistance Grants | 4,720,462 | 6,863,700  |
| Student Fees Received in Advance   |            | 1,257,519  | 364,273    |
| Provision for Long Service Leave   | 2(ix)b & 8 | 89,719     | —          |
| **Total Liabilities**              | 13,916,324 | 9,967,408  |

**NET ASSETS**                       | 9,184,906  | 8,655,220  |

| Contingent Liabilities             | 12         |            |
| Contractual Liabilities            | 13         |            |

The above Statement of Assets and Liabilities should be read in conjunction with the notes to and forming part of the financial statements.
### Consolidated Statement of Income and Expenditure

**for the Year Ended 31 December 1986**

<table>
<thead>
<tr>
<th>INCOME</th>
<th>Recurrent $</th>
<th>Equipment $</th>
<th>Minor Works $</th>
<th>Major Works $</th>
<th>ExTRANeous $</th>
<th>Eliminations $</th>
<th>Total 1985 $</th>
<th>Total 1986 $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tertiary Education Grants Received</td>
<td>30,914,592</td>
<td>910,000</td>
<td>260,000</td>
<td>970,000</td>
<td>57,100</td>
<td></td>
<td>33,111,692</td>
<td>28,436,050</td>
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<td>Research Grants</td>
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<td>907,669</td>
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<td>907,669</td>
<td>516,275</td>
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<tr>
<td>Fees for Short courses etc.</td>
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<td>2,166,934</td>
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<td>2,166,934</td>
<td>1,669,679</td>
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<td>Interest on Investments</td>
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<td>1,117,073</td>
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<td>1,117,073</td>
<td>1,067,859</td>
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<td>Rental Income</td>
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<td>2,604,492</td>
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<td>961,772</td>
<td>752,682</td>
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<td>Printing Income</td>
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<td>549,469</td>
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<td>549,469</td>
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<tr>
<td>Catering Income</td>
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<td>650,827</td>
<td></td>
<td>650,827</td>
<td>433,181</td>
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<tr>
<td>Other Income</td>
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<td>310,606</td>
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<td>310,606</td>
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<td>Premises — Internal Maintenance</td>
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<td>358,226</td>
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<td>8,722,396</td>
<td>(2,000,946)</td>
<td>39,776,042</td>
<td>33,536,538</td>
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</table>

**EXPENDITURE**

<table>
<thead>
<tr>
<th>Item</th>
<th>Recurrent $</th>
<th>Equipment $</th>
<th>Minor Works $</th>
<th>Major Works $</th>
<th>ExTRANeous $</th>
<th>Eliminations $</th>
<th>Total 1985 $</th>
<th>Total 1986 $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries</td>
<td>21,693,345</td>
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<td>2,475,464</td>
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<td>24,168,809</td>
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<tr>
<td>Practice Teaching Fees</td>
<td>153,737</td>
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<td></td>
<td>153,737</td>
<td></td>
<td>153,737</td>
<td>131,871</td>
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<td>Payroll Tax</td>
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<td></td>
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<td>1,373,682</td>
<td></td>
<td>1,373,682</td>
<td>1,223,015</td>
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<td>Accident Compensation Levy</td>
<td>207,723</td>
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<td></td>
<td></td>
<td>235,886</td>
<td></td>
<td>235,886</td>
<td>366,973</td>
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<td>Superannuation Contributions</td>
<td>1,822,016</td>
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<td></td>
<td></td>
<td>1,906,360</td>
<td></td>
<td>1,906,360</td>
<td>1,359,804</td>
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<tr>
<td>Occupancy Charges</td>
<td>1,642,720</td>
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<td></td>
<td></td>
<td>71,969</td>
<td></td>
<td>71,969</td>
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<tr>
<td>Maintenance — Building &amp; Equipment</td>
<td>798,881</td>
<td></td>
<td></td>
<td></td>
<td>697,121</td>
<td></td>
<td>1,373,776</td>
<td>771,083</td>
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<tr>
<td>Light, Fuel and Power</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>542,907</td>
<td></td>
<td>542,907</td>
<td>551,856</td>
</tr>
<tr>
<td>Cleaning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>674,934</td>
<td></td>
<td>674,934</td>
<td>574,228</td>
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<tr>
<td>Library Acquisitions</td>
<td>678,048</td>
<td></td>
<td></td>
<td></td>
<td>678,048</td>
<td></td>
<td>678,048</td>
<td>502,497</td>
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<tr>
<td>Equipment Purchases</td>
<td>449,953</td>
<td>1,000,717</td>
<td></td>
<td></td>
<td>1,487,388</td>
<td></td>
<td>1,487,388</td>
<td>948,060</td>
</tr>
<tr>
<td>Furniture</td>
<td>140,635</td>
<td></td>
<td></td>
<td></td>
<td>157,194</td>
<td></td>
<td>157,194</td>
<td>172,765</td>
</tr>
<tr>
<td>Telephone and Postage</td>
<td>296,798</td>
<td></td>
<td></td>
<td></td>
<td>353,098</td>
<td></td>
<td>353,098</td>
<td>315,672</td>
</tr>
<tr>
<td>Printing Charges</td>
<td>265,565</td>
<td></td>
<td></td>
<td></td>
<td>259,913</td>
<td></td>
<td>259,913</td>
<td>358,972</td>
</tr>
<tr>
<td>College and Staff Development</td>
<td>383,969</td>
<td></td>
<td></td>
<td></td>
<td>797,129</td>
<td></td>
<td>797,129</td>
<td>—</td>
</tr>
<tr>
<td>Catering Materials</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>358,972</td>
<td></td>
<td>358,972</td>
<td>—</td>
</tr>
<tr>
<td>Other Consumables</td>
<td>1,432,322</td>
<td>256,424</td>
<td></td>
<td>970,500</td>
<td>3,068,401</td>
<td></td>
<td>3,068,401</td>
<td>1,997,247</td>
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<tr>
<td>Building Projects</td>
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<td></td>
<td></td>
<td></td>
<td>1,226,924</td>
<td></td>
<td>1,226,924</td>
<td>314,640</td>
</tr>
<tr>
<td>Depreciation on Equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>168,635</td>
<td></td>
<td>168,635</td>
<td>142,290</td>
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<tr>
<td>Doubtful Debts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60,000</td>
<td></td>
<td>60,000</td>
<td>5,048,265</td>
</tr>
<tr>
<td>Employee Liabilities Division</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>89,719</td>
<td></td>
<td>89,719</td>
<td>—</td>
</tr>
<tr>
<td>Surplus (Deficit) for Year</td>
<td>31,245,393</td>
<td>1,000,717</td>
<td>256,424</td>
<td>970,500</td>
<td>7,774,268</td>
<td></td>
<td>39,246,356</td>
<td>26,906,518</td>
</tr>
<tr>
<td>Accumulated Surplus (Deficit)</td>
<td>(330,801)</td>
<td>(90,717)</td>
<td>3,576</td>
<td>(0)</td>
<td>948,128</td>
<td></td>
<td>529,686</td>
<td>6,552,020</td>
</tr>
<tr>
<td>1 Jan.</td>
<td>(319,792)</td>
<td>136,580</td>
<td></td>
<td>(1,140)</td>
<td>8,839,572</td>
<td></td>
<td>8,655,220</td>
<td>2,023,200</td>
</tr>
<tr>
<td>Accumulated Surplus (Deficit)</td>
<td>(650,593)</td>
<td>45,863</td>
<td>3,576</td>
<td>(1,640)</td>
<td>9,787,700</td>
<td></td>
<td>9,184,906</td>
<td>8,655,220</td>
</tr>
</tbody>
</table>
Statement of Sources and Applications of Funds  
for the Year Ended 31 December 1986

<table>
<thead>
<tr>
<th>Sources of Funds</th>
<th>1986</th>
<th>1985</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funds from Operations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inflow of funds from operations</td>
<td>$39,776,042</td>
<td>$33,482,071</td>
</tr>
<tr>
<td>Less Outflow of funds from operations</td>
<td>$38,988,002</td>
<td>$31,749,026</td>
</tr>
<tr>
<td>Total</td>
<td>$788,040</td>
<td>$1,733,045</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reductions in Assets</th>
<th>1986</th>
<th>1985</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inventories</td>
<td>$69,839</td>
<td>$30,366</td>
</tr>
<tr>
<td>Debtors and Prepayments</td>
<td>$13,018</td>
<td>—</td>
</tr>
<tr>
<td>Investments</td>
<td>$4,129,771</td>
<td>—</td>
</tr>
<tr>
<td>Total</td>
<td>$4,212,628</td>
<td>$30,366</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Increases in Liabilities</th>
<th>1986</th>
<th>1985</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Liabilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank Overdraft</td>
<td>—</td>
<td>$49,768</td>
</tr>
<tr>
<td>Creditors and Accruals</td>
<td>$2,878,367</td>
<td>$1,711,807</td>
</tr>
<tr>
<td>Commercial Borrowings</td>
<td>$2,518,727</td>
<td>—</td>
</tr>
<tr>
<td>Total</td>
<td>$5,397,094</td>
<td>$1,761,575</td>
</tr>
</tbody>
</table>

| Total Sources of Funds | 10,397,762 | 3,524,986 |

<table>
<thead>
<tr>
<th>Application of Funds</th>
<th>1986</th>
<th>1985</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increases in Assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debtors and Prepayments</td>
<td>—</td>
<td>$708,233</td>
</tr>
<tr>
<td>Investments</td>
<td>—</td>
<td>$892,999</td>
</tr>
<tr>
<td>Bank Accounts and Cash Balances</td>
<td>$1,594,081</td>
<td>—</td>
</tr>
<tr>
<td>SEC Security Deposit</td>
<td>$1,829</td>
<td>—</td>
</tr>
<tr>
<td>Total</td>
<td>$1,595,910</td>
<td>$1,601,232</td>
</tr>
<tr>
<td>Non Current Assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shares in Subsidiary</td>
<td>$2</td>
<td>—</td>
</tr>
<tr>
<td>Land, Buildings and Equipment</td>
<td>$8,730,519</td>
<td>$1,763,754</td>
</tr>
<tr>
<td>SEC Security Deposit</td>
<td>$71,331</td>
<td>—</td>
</tr>
<tr>
<td>Total</td>
<td>$8,801,852</td>
<td>$1,763,754</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reduction in Liabilities</th>
<th>1986</th>
<th>1985</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Liabilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank Loans</td>
<td>—</td>
<td>$160,000</td>
</tr>
</tbody>
</table>

| Total Applications of Funds | 10,397,762 | 3,524,986 |

The above Statement of Sources and Applications of Funds should be read in conjunction with the notes to and forming part of the financial statements.
### Recurrent Grant Account

Statement of Income and Expenditure For the Year Ended 31 December 1986

<table>
<thead>
<tr>
<th>Notes</th>
<th>1986</th>
<th>1985</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INCOME</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tertiary Education Grants Received</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• College Purposes</td>
<td>30,314,000</td>
<td>26,841,000</td>
</tr>
<tr>
<td>• Superannuation Supplementation</td>
<td>500,000</td>
<td>319,000</td>
</tr>
<tr>
<td>• Promotion of Equality of Opportunity</td>
<td>40,000</td>
<td>65,650</td>
</tr>
<tr>
<td>Other Income</td>
<td>60,592</td>
<td>54,467</td>
</tr>
<tr>
<td><strong>30,914,592</strong></td>
<td><strong>27,280,117</strong></td>
<td></td>
</tr>
<tr>
<td><strong>EXPENDITURE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salaries</td>
<td>21,693,345</td>
<td>19,271,785</td>
</tr>
<tr>
<td>Practice Teaching Fees</td>
<td>153,757</td>
<td>131,871</td>
</tr>
<tr>
<td>Payroll Tax</td>
<td>1,209,661</td>
<td>1,123,380</td>
</tr>
<tr>
<td>Accident Compensation Levy</td>
<td>207,723</td>
<td>318,096</td>
</tr>
<tr>
<td>Superannuation Contributions</td>
<td>1,892,016</td>
<td>1,345,181</td>
</tr>
<tr>
<td>Occupancy Charges</td>
<td>1,642,720</td>
<td>1,336,787</td>
</tr>
<tr>
<td>Maintenance – Buildings &amp; Equipment</td>
<td>798,881</td>
<td>633,986</td>
</tr>
<tr>
<td>Library Acquisitions</td>
<td>678,048</td>
<td>502,497</td>
</tr>
<tr>
<td>Equipment</td>
<td>449,953</td>
<td>253,843</td>
</tr>
<tr>
<td>Furniture</td>
<td>140,635</td>
<td>73,628</td>
</tr>
<tr>
<td>Telephone and Postage</td>
<td>296,798</td>
<td>280,704</td>
</tr>
<tr>
<td>Printing Charges</td>
<td>265,565</td>
<td>293,611</td>
</tr>
<tr>
<td>College and Staff Development</td>
<td>383,969</td>
<td>446,639</td>
</tr>
<tr>
<td>Other Consumables</td>
<td>1,432,322</td>
<td>1,071,797</td>
</tr>
<tr>
<td><strong>31,245,393</strong></td>
<td><strong>27,083,805</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Surplus/(Deficit) for year</strong></td>
<td>(330,801)</td>
<td>196,312</td>
</tr>
<tr>
<td><strong>Accumulated (Deficit) 1 January</strong></td>
<td>(319,792)</td>
<td>(516,104)</td>
</tr>
<tr>
<td><strong>Accumulated Surplus/(Deficit) 31 December</strong></td>
<td>(650,593)</td>
<td>(319,792)</td>
</tr>
</tbody>
</table>

### Equipment Grant Account

Statement of Income and Expenditure For the Year Ended 31 December 1986

<table>
<thead>
<tr>
<th></th>
<th>1986</th>
<th>1985</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INCOME</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tertiary Education Grant Received</td>
<td>910,000</td>
<td>795,000</td>
</tr>
<tr>
<td><strong>EXPENDITURE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment Purchase</td>
<td>1,000,717</td>
<td>672,755</td>
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<tr>
<td><strong>Surplus/(Deficit) for year</strong></td>
<td>(90,717)</td>
<td>122,245</td>
</tr>
<tr>
<td><strong>Accumulated Surplus/(Deficit) 1 January</strong></td>
<td>136,580</td>
<td>14,335</td>
</tr>
<tr>
<td><strong>Accumulated Surplus 31 December</strong></td>
<td>45,863</td>
<td>136,580</td>
</tr>
</tbody>
</table>
## Extraneous Funds Accounts

Statement of Income & Expenditure For the Year Ended 31 December 1986

<table>
<thead>
<tr>
<th>Notes</th>
<th>1986</th>
<th>1985</th>
</tr>
</thead>
<tbody>
<tr>
<td>$</td>
<td>$</td>
<td></td>
</tr>
</tbody>
</table>

### INCOME

Tertiary Education Grants Received
- Student Residences: $6,100, 1986; $10,900, 1985
- Needy Students: $51,000, 1986; $43,500, 1985

Research Grants: $907,669, 1986; $516,275, 1985

Fees for Short Courses, Consultancy etc: $2,166,934, 1986; $1,865,679, 1985

Interest on Investments: $1,117,073, 1986; $1,097,859, 1985

Rental Income
- Internal: $1,714,689, 1986; $1,338,586, 1985
- Caulfield Plaza: $509,318, 1986; $416,378, 1985
- Student Residences: $162,402, 1986; $118,772, 1985
- Other: $218,083, 1986; $217,532, 1985

Printing Income

Catering Income: $650,827, 1986; $433,181, 1985

Other Income: $310,606, 1986; $308,439, 1985


### EXPENDITURE

Salaries: $2,475,464, 1986; $1,888,963, 1985

Payroll Tax: $164,021, 1986; $99,635, 1985


Superannuation Contributions: $14,344, 1986; $14,623, 1985

Occupancy Charges: $71,969, 1986; $1,799, 1985

Maintenance and Repairs: $697,121, 1986; $732,420, 1985

Light, Fuel and Power: $542,907, 1986; $551,856, 1985

Cleaning: $674,934, 1986; $524,228, 1985

Equipment Purchases: $36,718, 1986; $21,462, 1985

Furniture: $16,559, 1986; $117,157, 1985

Telephone and Postage: $56,300, 1986; $32,968, 1985

Printing Charges: $113,532, 1986; $164,412, 1985


Catering Materials: $396,337, 1986; $358,972, 1985

College and Staff Development: $336,526, 1986; $350,490, 1985

Other Expenditure: $1,636,079, 1986; $901,450, 1985

Depreciation of Equipment: $168,635, 1986; $149,290, 1985

Provision for Doubtful Debts: $60,000, 1986

Provision for Employee Liabilities: $89,719, 1986; $(5,048,265), 1985

Surplus for Year: $948,128, 1986; $6,314,603, 1985

Accumulated Surplus 1 January: $8,839,572, 1986; $2,524,969, 1985

Accumulated Surplus 31 December: $9,787,700, 1986; $8,839,572, 1985
### Minor Works Grant Account

Statement of Income and Expenditure For the Year Ended 31 December 1986

<table>
<thead>
<tr>
<th></th>
<th>1986</th>
<th>1985</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INCOME</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tertiary Education Grant Received</td>
<td>260,000</td>
<td>217,500</td>
</tr>
<tr>
<td><strong>EXPENDITURE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minor Buildings Projects</td>
<td>256,424</td>
<td>217,500</td>
</tr>
<tr>
<td>Surplus for Year</td>
<td>3,576</td>
<td>—</td>
</tr>
<tr>
<td>Accumulated Surplus 31 December</td>
<td>3,576</td>
<td>—</td>
</tr>
</tbody>
</table>

### Major Works Grant Account

Statement of Income and Expenditure For the Year Ended 31 December 1986

<table>
<thead>
<tr>
<th></th>
<th>1986</th>
<th>1985</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INCOME</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tertiary Education Grant Received</td>
<td>970,000</td>
<td>100,000</td>
</tr>
<tr>
<td><strong>EXPENDITURE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major Buildings Projects</td>
<td>970,500</td>
<td>101,140</td>
</tr>
<tr>
<td>(Deficit) for year</td>
<td>(500)</td>
<td>(1,140)</td>
</tr>
<tr>
<td>Accumulated (Deficit) 1 January</td>
<td>(1,140)</td>
<td>—</td>
</tr>
<tr>
<td>Accumulated (Deficit) 31 December</td>
<td>(1,640)</td>
<td>(1,140)</td>
</tr>
</tbody>
</table>

---

### Notes to and forming part of the Annual Accounts for the Year Ended 31 December 1986.

1: **LEGAL STATUS AND NATURE OF ACTIVITIES**

i) The Council of the Chisholm Institute of Technology is a body corporate established under an Order in Council pursuant to Section 23 of the Post-Secondary Education Act 1978, and gazetted on 3 March 1982.

ii) The Institute is responsible to the State Minister for Education through the Victorian Post-Secondary Education Commission.

iii) The principal objectives and functions of the Institute are:
    a) the conducting of post-secondary education programs;
    b) the conducting of such other activities deemed desirable to advance post-secondary education; and
    c) the provision of research, testing, and other facilities and expertise for the professions, business, industry, government and the community in general.
2: STATEMENT OF PRINCIPLE ACCOUNTING POLICIES

The purpose of this statement is to disclose information relating to the Institute's accounting policies and changes in accounting treatment where such matters are material to the financial statements.

i) Accounting Basis
   The Annual Financial Statements have been prepared on a 'going concern' basis using historical costs and accrual accounting modified to the extent that certain revenues due have not been accrued, in accordance with Government policy (refer note 2 (xii)). The Annual Financial Statements do not purport to disclose current values.

ii) Format of Statements
   a) The statements are presented in a format consistent with the requirements of the Post Secondary Education Act 1978.
   b) Institute income and expenditure is accounted for on a specific fund basis under the headings of: Recurrent, Equipment Grants, Minor Works Grants, Major Works Grants and Extraneous. The Consolidated Statement of Income and Expenditure summarises all financial transactions occurring under each of these headings. The detailed supporting statements elaborate on the categories of income and expenditure and provide comparative figures for the previous year.
   c) In preparing the statements all internal transactions have been eliminated.

iii) Treatment of Fixed Assets
   a) In accordance with the provision of funds to tertiary institutions by the Commonwealth Tertiary Education Commission (CTEC) and the Victorian Post-Secondary Education Commission (VPSEC) assets purchased from grants covering Recurrent, Equipment, Minor Works and Major Works are not capitalised but charged as expenditure at the time of acquisition against the relevant grant from which the asset was purchased. In most cases it is not permissible for those grants or donations received by the Institute to be used for purposes other than that specified.
   b) Purchase of equipment from sources other than tertiary education assistance and research grants are capitalised only where the unit cost exceeds $400. (1985 $200 refer note 2ix (a).)
   c) Land and buildings occupied and/or constructed by the Institute on titles vested in the name of the Minister for Education are not capitalised whereas buildings under construction on land vested in the name of the Institute are capitalised.
   d) The cost of land, and buildings on land vested in the name of the Institute are capitalised but not disclosed separately. The cost of buildings has not been depreciated as separate valuation of the land and building components have not been made.

iv) Depreciation
   a) Motor vehicles are replaced every two years or 40,000 kilometres whichever is the shorter. As it is normal to recoup the original purchase cost the charging of depreciation on motor vehicles is not considered appropriate.
   b) Where fixed assets are capitalised in accordance with note 2, (iii), (b) and (c) depreciation is charged on the straight line method assuming a working life of ten years for each fixed asset.

v) Taxation
   The Institute is not subject to income tax but is liable to other taxes in accordance with State and Federal legislation.

vi) Terms and Conditions of Employment
   Terms and conditions of employment with the Institute are determined in accordance with the provisions of the Post-Secondary Education Act 1978 and such other Acts as applicable to the Institute from time to time.

vii) Accrued Liabilities
   Where goods and services legally contracted for have been delivered or rendered to the Institute but not
paid for at balance date, a legal liability for payment exists. The value of all such goods and services has been accrued as a liability at balance date.

viii) Events Subsequent to Balance Date

a) At the date of this report there does not exist any charge on assets securing the liability of any other person or organisation which has arisen since 31 December, 1986.

b) No contingent or other liability has become enforceable or is likely to become enforceable on or before 31 December, 1987, which will or may substantially affect the ability of the Institute to meet its obligations as and when they fall due.

c) At the date of this report no circumstances have arisen which would render any amount stated in the financial statements and notes accompanying thereto misleading.

ix) Changes in Accounting Policy

a) Fixed Assets
During the year the value of fixed assets capitalised when purchased from sources other than tertiary education assistance and research grants was changed from $200 to $400. This change does not have a material effect on the Annual Financial Statements.

b) Provisions for Employee Leave Benefits
The Long Service Leave liability for employees whose salaries are funded from tertiary education assistance grants is covered by those grants. However, the Institute will incur a liability for long service leave for employees whose salaries are funded from sources other than tertiary education assistance and research Grants. This liability will be met from Extraneous funds.

The Institute has decided to recognise the potential for this liability for the relevant employees who have completed five years service. The extent of this liability at 31 December 1986 is $89,719. (1985 $76,325).

The value of Long Service Leave due in respect of employees funded from tertiary education assistance and research grants is estimated at $4,405,603 at 31 December 1986.

x) Superannuation
No provision has been made for the future pension costs of former employees who were members of the Victorian State Superannuation Scheme. Such costs are accounted for as and when they emerge and are invoiced to the Institute by the Trustees of the Scheme. The impact of this cost has been lessened by the announcement in 1981 by the Minister for Education that the Commonwealth Government had decided to assist with the additional superannuation costs to institutions for staff in State Government emerging cost schemes such as the Victorian State Superannuation Scheme. This additional funding by way of supplementation relates to costs beyond those incurred in 1981.

During the current year, supplementation amounting to $500,000 was received (1985 $319,000), refer to Statement 4.

xi) Inventories
Inventories on hand consist of raw materials and finished goods of consumable items used in the normal course of business. These inventories are valued at the lower of cost or net realisable value using both first in, first out and specific identification methods.

xii) Accumulated Deficit – Recurrent Grants
The Institute is due to receive establishment and supplementation grants to the order of $599,000 in respect of expenditures incurred in 1986 (1985 $206,000). In accordance with Government accounting policy these grants have not been accrued. Had they been accrued the Institute's recurrent deficit for 1986 would have been reduced from $330,801 (1985 surplus $196,312) to a surplus of $268,199 (1985 surplus $402,312).

The accumulated recurrent deficit carried forward from 1986 would have been $51,513 (1985 deficit $113,792).
3. DEBTORS AND PREPAYMENTS

The balance consists of:

<table>
<thead>
<tr>
<th>Description</th>
<th>1986 ($)</th>
<th>1985 ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grants Receivable</td>
<td>606,500</td>
<td></td>
</tr>
<tr>
<td>Prepaid Salaries</td>
<td>657,563</td>
<td>836,027</td>
</tr>
<tr>
<td>Other Prepayments</td>
<td>69,763</td>
<td>254,575</td>
</tr>
<tr>
<td>Sundry Debtors</td>
<td>451,541</td>
<td>698,781</td>
</tr>
<tr>
<td>Accrued Interest on Investments</td>
<td>77,092</td>
<td>86,717</td>
</tr>
<tr>
<td>Loans to Students</td>
<td>56,630</td>
<td>56,007</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,919,089</td>
<td>1,932,107</td>
</tr>
</tbody>
</table>

Less Provision for Doubtful Debts

<table>
<thead>
<tr>
<th>Description</th>
<th>1986 ($)</th>
<th>1985 ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>60,000</td>
<td>60,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,859,089</td>
<td>1,872,107</td>
</tr>
</tbody>
</table>

4. INVESTMENTS

All investments are made in accordance with Section 4 of the Victorian Trustees Act 1958 and are stated at cost.

The balance consists of:

<table>
<thead>
<tr>
<th>Description</th>
<th>1986 ($)</th>
<th>1985 ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term Deposits</td>
<td>6,989,980</td>
<td>11,016,551</td>
</tr>
<tr>
<td>At Call Deposits</td>
<td></td>
<td>100,000</td>
</tr>
<tr>
<td>Other Authorised Investments</td>
<td>1,000</td>
<td>4,200</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>6,990,980</td>
<td>11,120,751</td>
</tr>
</tbody>
</table>

5. LAND, BUILDINGS AND EQUIPMENT

Valued at Cost

<table>
<thead>
<tr>
<th>Description</th>
<th>1986 ($)</th>
<th>1985 ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freehold Land and Buildings</td>
<td>684,187</td>
<td>557,574</td>
</tr>
<tr>
<td>Buildings under construction</td>
<td>9224,125</td>
<td>943,583</td>
</tr>
<tr>
<td>Motor Vehicles</td>
<td>119,087</td>
<td>116,150</td>
</tr>
<tr>
<td>Equipment</td>
<td>1,843,298</td>
<td>1,529,585</td>
</tr>
<tr>
<td><strong>Less: Provision for Depreciation</strong></td>
<td>317,925</td>
<td>149,290</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,525,373</td>
<td>1,380,295</td>
</tr>
<tr>
<td>Fixtures and Fittings</td>
<td>6,714</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>11,559,486</td>
<td>2,997,602</td>
</tr>
</tbody>
</table>
6. BANK ACCOUNTS AND CASH BALANCES

The balance consists of:

<table>
<thead>
<tr>
<th>Account</th>
<th>1986</th>
<th>1985</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance Account</td>
<td>270,439</td>
<td>33,892</td>
</tr>
<tr>
<td>Maintenance Account - unpresented cheques</td>
<td>(278,666)</td>
<td>(2,011,987)</td>
</tr>
<tr>
<td>Fees Suspense Account</td>
<td>54,688</td>
<td>341,361</td>
</tr>
<tr>
<td>Caulfield Plaza Account</td>
<td>4,954</td>
<td>3,650</td>
</tr>
<tr>
<td>Petty Cash</td>
<td>56,184</td>
<td>(1,537,897)</td>
</tr>
</tbody>
</table>

7. CREDITORS AND ACCRUALS

The balance consists of:

<table>
<thead>
<tr>
<th>Account</th>
<th>1986</th>
<th>1985</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Creditors</td>
<td>3,300,234</td>
<td>718,582</td>
</tr>
<tr>
<td>Refundable Deposits</td>
<td>52,270</td>
<td>2,080</td>
</tr>
<tr>
<td>Salary Accruals</td>
<td>—</td>
<td>3,021</td>
</tr>
<tr>
<td>Other Accrued Expenses</td>
<td>—</td>
<td>10,569</td>
</tr>
<tr>
<td>Student Union Building Development Fund</td>
<td>964,918</td>
<td>477,286</td>
</tr>
<tr>
<td>TOTAL</td>
<td>5,329,897</td>
<td>1,211,538</td>
</tr>
</tbody>
</table>

8. PROVISION FOR LONG SERVICE LEAVE

The balance consists of:

<table>
<thead>
<tr>
<th>Provision for Long Service Leave</th>
<th>1986</th>
<th>1985</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>89,719</td>
<td>—</td>
</tr>
</tbody>
</table>

9. FUNDS FROM OPERATIONS

The reconciliation of funds from operations with surplus/(deficit) for the year is as follows:

<table>
<thead>
<tr>
<th>Item</th>
<th>1986</th>
<th>1985</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funds from Operations</td>
<td>752,540</td>
<td>1,733,045</td>
</tr>
<tr>
<td>Less: Provision for Employee Liabilities</td>
<td>89,719</td>
<td>(5,048,265)</td>
</tr>
<tr>
<td>Less: Provision for Depreciation</td>
<td>168,635</td>
<td>149,290</td>
</tr>
<tr>
<td>Surplus/(Deficit) for year</td>
<td>494,186</td>
<td>6,632,020</td>
</tr>
</tbody>
</table>
10. SHARES IN MANAGEMENT COMPANY

The Institute acquired on 28 November 1986 shares in a shelf company—Pelletray Pty Ltd., to be used as the vehicle for management of the Technology Tower project which will become operative in 1987. The Company had no trading activity to 31 December 1986 and its Balance Sheet at that date was: $1

Authorised Capital 10,000 shares at $1 each 10,000
Less Unissued Capital 9,998 shares 9,998
Issued and paid up Capital 2
Represented by:
Cash at Bank 2

11. STATE ELECTRICITY COMMISSION SECURITY DEPOSIT

The State Electricity Commission required a security deposit to be lodged in connection with the Technology Tower project. This deposit is refundable over 10 years following occupation of the building.

12. CONTINGENT LIABILITIES

The Institute is currently engaged in litigation which if not resolved in the Institute's favour could involve a payment of up to $62,600 plus costs.

13. CONTRACTUAL LIABILITIES

At 31 December 1986 the Institute had contracted but not provided for in the financial statements capital expenditure in respect of:

Technology Tower project – Caulfield $4,414,521
Frankston – $6,769,530

Arrangements have been made to finance the cost of the Technology Tower project by a sale and lease back purchase agreement with National Bank Leasing Pty Ltd—a wholly owned subsidiary of the National Australia Bank Limited.

Funding of the Frankston works will be met from grants approved by government and to be received by the Institute over the construction period of the projects involved.

14. OTHER EXPENDITURE (EXTRANEOUS FUNDS)

This item includes payments of an abnormal nature made to former employees.
Certification of Annual Financial Statements
for year ended 31 December 1986

In our opinion the accompanying Annual Financial Statements of the Chisholm Institute of Technology, comprising the Balance Sheet, Summary Statement of Income and Expenditure, Statement of Sources and Applications of funds, together with the detailed supporting statements and accompanying notes, which form part of the Annual Financial Statements, have been drawn up so as to show fairly the financial affairs of the Institute and its activities for the year ended 31 December 1986.

Before the financial statements were prepared steps were taken to:

i) Cause all known bad debts to be written off and adequate provision to be made for doubtful debts.

ii) Ascertain whether any current assets, other than debtors, are unlikely to realise in the ordinary course of business their value as shown in the accounting records and, if so, to cause:
   a) those assets to be written down to an amount which they might be expected to realise; or
   b) adequate provision to be made for the difference between the amount of the value so shown and the amount they might be expected to realise.

iii) Ascertain whether any non current asset is shown in the accounting records at an amount which, having regard to its value to the undertaking as a going concern, exceed the replacement cost in its current condition at balance date.

Lionel E. Ward
President of Council
30/4/87

Geoffrey Vaughan
Director of the Institute
29/4/87

Bill L. Priem
Chief Finance Manager
29/4/87
8. Publications

The following is a list of publications by Institute staff, approved by the Higher Degrees and Research Committee, and published during 1986:

**Academic Registrar's Department**


**David Syme Business School**


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**School of Education**


**School of Social and Behavioural Studies**


DAVID MUSCHAMP (Ed.), Political Thinkers, Melbourne, Macmillan, 1986.

Faculty of Technology