



The University of New South Wales

GUIDE

TO

THE UNIVERSITY

OF

NEW SOUTH WALES

AT

KENSINGTON

1955

THE UNIVERSITY OF NEW SOUTH WALES

The University of New South Wales was incorporated in 1949. The objects of the University are: to provide facilities for higher instruction and advanced training in the various branches of technology and science in their application to industry and commerce; to aid by research and other scientific means the advancement and development of science in its application to industry and commerce.

Four features distinguish the University:

* In all courses within the University, a certain amount of time is devoted to subjects of a general educational character outside the student's technical field.

* In general, courses in the University are available on a part-time basis, as well as a full-time basis. This means that students, who, from choice or from economic reasons, cannot attend full-time courses, can pursue the same courses of study and obtain the same degrees, while supporting themselves in employment, and gaining valuable practical experience.

* Practical training in industry forms part of the curriculum of most courses.

* The University is authorised to establish and maintain branches, departments or colleges at Newcastle, Wollongong, Broken Hill and other places in New South Wales. The Newcastle University College was established in 1951. As well as courses in Science, Engineering and Architecture, it provides an Arts Course. Courses are also available at Wollongong, Broken Hill, Orange and Lithgow.

In addition to extensive research programmes initiated in various Schools, the University undertakes or acquiesces in special investigations in the field of science or technology.

The growth of the University has been remarkable. There are at present over 15,000 students in the University at all centres and the total full-time staff, including the part-time teaching staff, 555, and the part-time lecturing staff, approximately 400.

Since its inception, 868 students have graduated from the University, and these graduates have included 39 Doctors and 90 Masters' degrees.

The University of New South Wales is located mainly at three major centres, Kensington, Broadway and Newcastle. This pamphlet relates to the activities at Kensington.

THE KENSINGTON SITE

The 70 acre site at Kensington was originally a race-course. This is not unprecedented, as just over a hundred years ago the University of Sydney ~~was~~ ^{began to} develop on what had been a race-course.

The buildings and equipment on this site represent only a portion of the University's development.

The N.S.W. University of Technology was a development from the Sydney Technical College. Naturally, such a development could not take place without the result that many activities are still maintained in the buildings at Broadway, where the Schools of Applied Chemistry, Civil Engineering, Electrical Engineering, Mechanical Engineering, and the School of Architecture are located. These schools are gradually being moved out to Kensington as more accommodation becomes available.

The Main Building

The first permanent building at Kensington was officially opened on April 16, 1955.

The main building faces south, with a facade 150 ft long and 10 ft high at the main entrance. The entrance is marked by a beam in the facade where a sandstone fin carries the mural sculpture.

The sculpture, by the artist, giving due consideration to aesthetic factors in all his professional activities.

The Falconer, representing the Tech's heritage, has his eye on the aesthetic, represented by the symbol of beauty, while the eagle, symbol of speed, is restricted on a leash.

The building has four floors and is built of brick and stone.

Brick was used because at the time structural steel in sufficient quantity was not available. The interior blends coachwood, the main material, with other materials.

* The name of the University was changed to the University of New South Wales on 7 October 1958.

The walls and ceiling of the foyer are clad with coachwood. The theatre, seating 300 and panelled with coachwood, recalls the shape of a Greek temple. The curtains are of a deep red color.

The stage is a permanent structure, and the lighting system is of extreme flexibility. The stage room is a permanent structure, and the production of stage functions is a permanent structure. The National Institute of Design is a permanent structure.

Walls and ceilings of the corridors are painted in a contrasting color, giving a feeling of space and dignity. The corridor on the third floor is broken in its length by the Research Architectural Exhibition Gallery.

The canteen, the Department of Production Engineering, Physics Workshop, Textile Technology, and the Electronic Computing Laboratory are in the Department of Nuclear and Radiation Chemistry are on the ground floor; Administration, the library, and Mining Engineering on the first floor; Humanities on the second floor; the School of Architecture on the third floor.

THE KENSINGTON COLLEGE

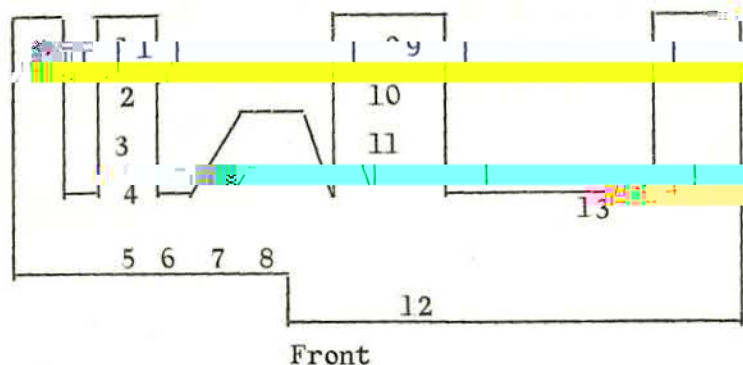
As the new residential College has been built on a site, rooms on three floors.

The College building has been designed to reflect something of the Australian way of life, with ample verandahs and terraces. Landscaping and sculpture enhances the appearance of the courtyards.

The College accommodates 170 students, some resident staff and tutors. The building is self contained with common rooms, dining rooms, service kitchen, and a canteen.

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GROUND FLOOR



- * Curriculum
- 1 The J. E. Carroll Memorial Laboratory
- 2 Electronics Laboratory
- 3 Physics Workshop
- 4 Glass Blowing Workshop
- 5 Metal Cutting Laboratory
- 6 Engineering Inspection Laboratory
- 7 Methods Engineering Laboratory
- 8 Metrology Laboratory
- 9
- 10
- 11
- 12 UTECOM Computing Laboratory
- 13 Department of Nuclear and Radiological Chemistry

DEPARTMENT OF PRODUCTION AND INDUSTRIAL ENGINEERING

Production processes of casting, forming, welding, turning, moulding and machining. They must also be familiar with the materials, machines and tools of such processes.

The degree course in Industrial Engineering in an Australian University is designed to train men with engineering operations and the responsibilities which attend the planning, developing and controlling of industrial operations.

The Metal Cutting Laboratory is equipped with dynamometers and recording equipment; students are shown how to measure cutting force, speeds, surface finish, the work and power required by machining components, and the times for various operations.

Improved methods of production is the main subject studied in the Methods Engineering Laboratory. This ranges from the layout of plant to the detailed movement of operators in the shop.

The metrology Laboratory houses a selection of instruments of extremely high precision for the highest standards in gauge and tool making. It is the only place of better quality equipment in the engineering factories of this country.

THE SCHOOL OF TEXTILE TECHNOLOGY

Students can choose from four courses.

On graduation they will help to meet the technological

THE ELECTRONIC COMPUTING LABORATORY

Recent developments in Science, Technology and Commerce have made it necessary to perform large quantities of complicated calculations and to process vast quantities of data. This has led to the development of computers

such as the UNIVAC computer.

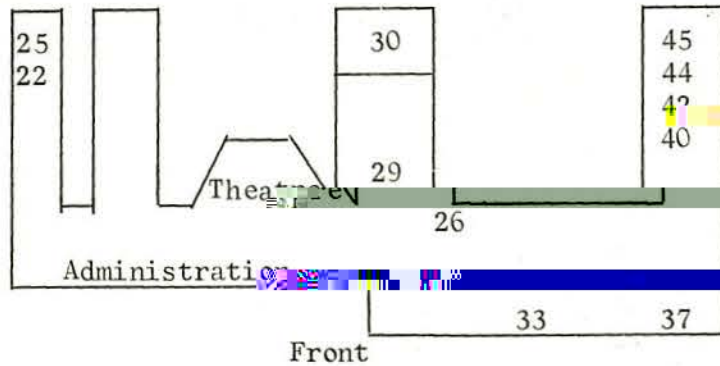
Installation of this machine marks a major step towards providing computing facilities in Australia.

This laboratory is used for research in the field of electronic computing.

It is used for the application of computers to various engineering problems.

Careful attention has been given to the safety of the public generally.

FIRST FLOOR



- 25 Physics Section
- 22 Lecture Room
- 30 Fuel Technology Laboratory
- 29 Examinations
- 26 Guidance Officer
- 31 Fuel Laboratory
- 36 Ventilation Laboratory
- 37 Mineral Dressing Laboratory
- 40 Rock Sectioning Room
- 42 Assay
- 44 Mineral Dressing Laboratory
- 45 Pilot

ADMINISTRATION

The University is governed by a Council with the Vice-Chancellor as chief executive officer.

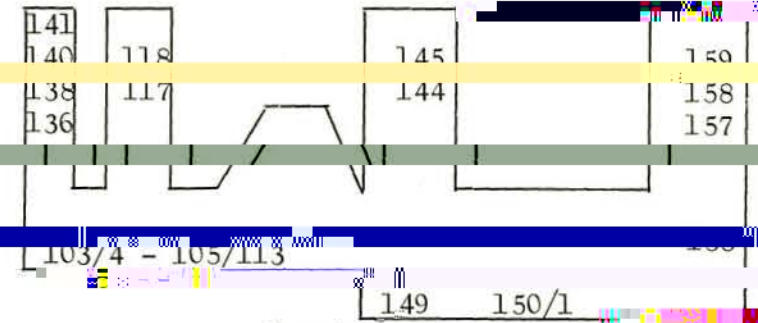
The detail of University business is organised through a number of Standing Committees:-

- Executive, Finance, Personnel, Academic
- Buildings and Equipment, Library
- Public Relations Committees.

The Professorial Board furthers and co-ordinates the work of the Faculties. The six Faculties are composed from the nineteen Schools

Administration, apart from the work of the Schools, is carried out through two Divisions - under the Director of Administration and the Director of Finance, respectively.

SECOND FLOOR



- 103/4 - 105/113 Lecture Rooms
- 105 Vacuum
- 106 Staff Works
- 107 Lecture Room
- 108 Physics Library
- 109 Geology
- 113 Optics Grinding
- 117 Teaching Dark Room
- 118 Lecture Room
- 136 Nucleonics and Neutron Physics Laboratory
- 138 Teaching Dark Room
- 140 Lecture Room
- 141 Lecture Room
- 144 Lecture Room
- 145 Building Science Laboratory
- 146 Studio (Architecture)
- 147 Women Students Common
- 148 Preparatory Room
- 149 Geology
- 150 Lecture Theatre
- 150/1 Clay Research Laboratory
- 155 Lecture Theatre
- 157 Geology
- 158A Clay Research Laboratory
- 159 Geological Museum
- 159B Geophysics Laboratory



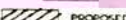



As the University is a technical university, its complementary role in winning resources for the earth, these subjects of technology are linked in the School

Degree courses in Mining Engineering or Applied Geology lead to the degree of Bachelor of Engineering

Students obtain approximately 18 months of practical experience before graduation. Theoretical training



LEGEND

-  EXISTING
-  TEMPORARY
-  PROPOSED
-  EXISTING
-  PROPOSED
-  PARKING AREAS

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science and engineering, and their practical courses in well equipped laboratories, have enabled them, after graduation, to rise rapidly to responsible positions.

The Department of Mining Engineering is equipped with laboratories and equipment for student work and research.

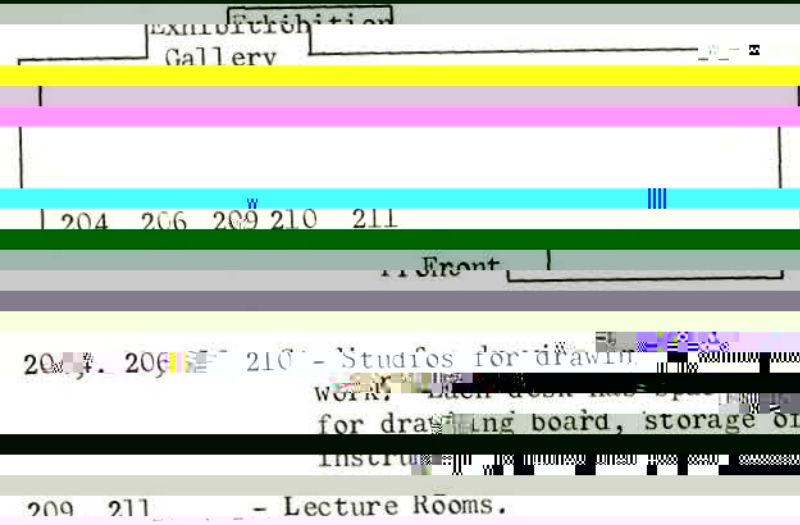
Research and student training in the geology department is directed towards the study of mineral materials, their source or supply and their commercial application and also to the important study of rock structures and properties.

THE SCHOOL OF APPLIED PHYSICS

The course in Applied Physics is designed to equip students for work in industry and in the field of applied science generally. The course, over four years, provides a thorough training in the fundamentals of physics and in mathematics, and particular emphasis is placed on practical training. Practical training includes courses in physical techniques; for example, high vacuum, electronics, photometric photography and courses in formal experimentation designed to train the student in research techniques. The extra-curricular training includes substantial periods in industry in each of the second and third years.

THE SCHOOL OF HUMANITIES & SOCIAL SCIENCES

Faculty, music, drama, and social Sciences, compulsory courses in English, history and Philosophy, and electives from the fields of sciences - Government, economics or psychology. The purpose of these courses is to broaden the education of the students. The University has the main function of training scientists and technologists, but it aims also to provide a liberal education. The courses in humanities and social sciences attempt to provide the breadth of knowledge, the refinement of sensibility and the sense of values which will increase the student's understanding and enjoyment of life, make him competent in fields other than those in which he is a specialist, and enable him to recognise the human and social implication of his work, both as a scientist and technologist and as a citizen.



THE SCHOOL OF ARCHITECTURE AND BUILDING

The courses are conducted at Kerp... The course for degree of Bachelor of Architecture and the diploma courses in Architecture, Building, and Quantity surveying for the diploma of associateship of the Surveyors Technical Council. The Architecture courses are of five-year duration.

Our school of architecture... It has about 400 students... 50 students training to be master builders or quantity surveyors and several students for the... Throughout the course we keep... constructor and a business man, and the two parts of the course are balanced and arranged in conformity... advancement.

THE DALTON CHEMISTRY BUILDING

On the ground floor are two spacious, well-lit teaching laboratories for first, second and third year students and Chemistry, Chemical Engineering, Food Technology, Metallurgy, Biology, textile technology and General Science.

The two laboratories are divided by a balance room and an instrument room with laboratory servicing rooms on the other side of the corridor. A small laboratory is equipped for gas and fuel analysis.

The third floor is divided into small laboratories for lecturers with a research laboratory for higher degree students and teaching fellows.

A lecture room seats 100 students.

Laboratories are specially equipped for cinematography, X-ray fluorescence, Electro-Chemistry, Spectrography (with a dark room), and Analytical Radio-Chemistry.

The Library.

Pending the construction of a special building, the Library is housed on the second floor. The Reading Room is on the left of the stair case and lobby with shelves on three sides containing the volumes in open stacks.

So much scientific knowledge is disseminated in periodicals that a special room on the right of the lobby is set apart for the 1,000 periodicals currently received. Adjoining this is a work room where accessions are entered and stamped, the books lettered and prepared, binding, requisites made, etc.

The Stack Room accommodates journals and books which are not in frequent demand.

There is a regular exchange of publications between Kensington (10,000 vols.) and the larger library at Ultimo (30,000 vols.).

The main functions of the School of Metallurgy are to train metallurgists for the mining, engineering, and research and development industries and to conduct research work in connection with the industrial development of Australia.

The metallurgist is interested in all activities associated with metals from their extraction from minerals, through their refining and the production of alloys, to the working and shaping of their into useful articles.

The basic qualifications for a metallurgist are a course in metallurgy, chemical engineering or physics, and a good ability in chemistry and physics, an interest in things scientific and engineering in general, and (especially in work on the production side of industry), a personality which enables him to get on well with others.

The School offers two courses. One is a full-time course of four years; the other is a part-time course designed to enable students who prefer, for economic or other reasons, to study while they work in industry. This is a two-year course.

The School has well equipped laboratories to enable it to present adequate experimental work as well as to conduct a wide range of research projects involving such topics as foundry technology, titanium metallurgy and uranium extraction metallurgy.

CORALITE

A large concrete wall (6500 sq. ft.) is housed in a special building on the Kensington site. The walls are of this concrete. The floor is covered with concrete at the bottom.

For experiments with radiation it is brought to the surface and controlled from the concrete wall.

THE SCHOOL OF CHEMICAL ENGINEERING

The School of Chemical Engineering is concerned with the training of Chemical Engineers, Industrial Chemists and Food Technologists.

Chemical Engineers are concerned with the design, construction, operation and maintenance of chemical plant. The course is offered on a full-time and a part-time basis. The early years are spent in obtaining a sound training in Mathematics, Physics, various Unit Operations and Instrumentation. In the latter stages of the course, students are given intensive training in Chemical Engineering.

The Industrial Chemist is trained for the process side of chemical industry. He is concerned with the operation of chemical processes, industrial analysis and the organisation of these processes. He also studies matters concerning the relationship between management and labour, such as industrial relations. The course follows the part-time Applied Chemistry course for the first three years. It then provides intensive specialisation training for the Chemical Process Industries.

The interests of the Food Technologist cover the handling of fresh foods of all kinds, cold storage, canning, packaging, drying, dehydration and freezing of foods. His basic training is very similar to that of the Chemical Engineer, but in addition he receives training in the relevant biological sciences.

The Research Building

In this building are the laboratories of Paint Technology and Ceramic Technology. Much of the School's research will be located on the mezzanine floor. For example, a research group is studying the properties of high temperature uranium refractories.

The 60 ft. tower is used for the scale investigation of an industrial nature, particularly for such problems as those involved in distillation, liquid extraction and fluidised reactors.

The School of Electrical Engineering - Project Laboratories

An Impulse Generator is available in the 60 ft. tower of the building. When fully assembled, the Impulse Generator can produce a voltage surge of up to 2.1 million volts. It is used to test high voltage electrical equipment.

surges as high as 2.1 million volts. This is the highest Impulse Generator available in Australia at the present time and is probably the highest impulse generator in the world. It can be taken to test high voltage equipment on any suitable site.

The University of Technology Analogue Computer (UTAC) is on the upper floor. Research is conducted to improve this computer and programming problems connected with UTACOM are being studied. On both floors are test

The Mechanical Engineering Building

A section of the School of Mechanical Engineering is located in the southern of the two buildings.

The building contains the Automatic Control Laboratories and Refrigeration Laboratories. Research activities by students and lecturers will be carried on in this building.

One project is connected with Solar Energy for which the equipment is mounted on the roof of the tower.

THE SCHOOL OF WOOL TECHNOLOGY

Improved efficiency of the wool industry is the aim of the School. The course consists of four years full-time study, but the second and third years each provide for a period of approximately six months approved work in the industry to gain practical experience.

The aim is to provide a pool of graduates in whom has been inculcated a liberal scientific education, habit of exact and logical thought. These men will be able to contribute to the wool production, wool commerce

They will also be good practical men capable of handling wool and recognising its technical characteristics, through facility in the use of scientific methods. The wool trade is based

THE SCHOOL OF HOSPITAL ADMINISTRATION

The modern hospital demands a competent trained executive officer in the management of its affairs.

The School offers two courses, a three-year course leading to a Bachelor of Science in Hospital Administration and a one-year course leading to a Certificate in Hospital Administration.

Candidates can be selected from individuals who are already working in hospitals or closely allied fields, and who are considered to have potential executive ability.

The three-year course is designed to give the Administrator a firm grasp of fundamental knowledge, methods and techniques with which he can fulfil his responsibilities.

THE SCHOOL OF TRAFFIC ENGINEERING

This is essentially a post-graduate School which aims to train graduates in engineering, science, economics and other fields in the fundamentals of traffic engineering and other traffic works, and the operational analysis of highway and other traffic systems.

The City of Sydney, with its high traffic density and major roads, is a natural laboratory for much of the research to be carried out by the School. There will be a laboratory for studying applications of engineering to traffic control and safety problems.

Mathematics

Commerce

Lecture Rooms

Mathematics Applied Psychology

The 21st lecture rooms and three special purpose

entrance provide additional lecture rooms.

THE SCHOOL OF MATHEMATICS

Instruction in mathematics provided by the School of Mathematics for students undertaking courses in all schools.

Mathematics are available for mathematics general science course.

THE SCHOOL OF APPLIED PSYCHOLOGY

To make an industrial society work, we must understand its human as well as its technical aspects. Applied Psychology is one of the sciences concerned with a study of human behaviour. It seeks principles to explain and predict human action. It deals with human behaviour but it is based on solid theoretical contributions to psychology. It is thus both a technology and a social science.

There are a number of branches of Applied Psychology. Psychologists in the fields of industrial psychology, personnel management, "human engineering" (the design of machines and processes allowing for the qualities of the human operator), educational and vocational guidance, clinical psychology, child development, selection and placement in the Armed Services, and teaching and research.

SCHOOL OF ACCOUNTANCY

Students are given a thorough grounding in Accounting and associated subjects. Considerable emphasis is placed on the study of the methods of Management Accounting. The subjects are built upon a foundation of general disciplines such as Philosophy, History, English and Psychology, and subjects such as Mathematics. Special facilities are provided with an insight into the practical aspects of management.

THE SCHOOL OF ECONOMIC STUDIES

The demand for persons trained in the methods of economic analysis is considerable. In recent years, both the commercial and industrial concerns have found it to their benefit to employ economists in a professional capacity. The study of Economics is based upon a foundation of economic theory, given in both general and specialist courses. Particular emphasis is placed upon the application of the principles of economic analysis to problems of the application of knowledge to industry.