

22. This statement of policy reflects the growing tendency to realize that educational institutions will accept enthusiastically any proposals which, by placing less stress on final external examinations, give them greater scope and flexibility in providing courses of instruction best suited to the needs of the students and of the profession.

5. THE EDUCATION OF UNIVERSITY STUDENTS IN ENGINEERING

(1) THE B.E. DEGREE

23. Candidates for the degree of B.E. of the University of New Zealand must have passed the University Entrance Examination. The engineering student is not specially restricted in the subjects which are to be taken for University Entrance, but the Calendar of the University of New Zealand contains a note that students who propose to take the B.E. degree should include English, Mathematics, and Physics or Chemistry or Mechanics in their school course. Probably about half the students remain at school at least a year after passing University Entrance, partly in order to get a better grounding in subjects such as Mathematics and the physical sciences and partly to qualify for more remunerative bursaries or scholarships than the ordinary University bursary which is awarded to any student who obtains University Entrance.

24. Examinations in professional engineering were first instituted by the University of New Zealand in 1892 when certificates were drawn up in mechanical, civil, mining, and metallurgical engineering for issue to students "who have gone through a course of study at the School of Engineering and technical science at Canterbury College." In the following year, however, the University substituted for these the degree of B.Sc. (Eng.) in one or other of the above branches. The degree of B.E. was instituted in 1905. The degree of B.E. (Hons.) dates from 1934 for the civil, electrical, and mechanical branches and from 1947 for the chemical branch. The first stage of the B.E. course is known as the Intermediate Examination, and this may be taken at any University college, the subjects being Pure Mathematics, Applied Mathematics, Physics, and Chemistry, all as set out in the prescription for Stage I of the B.A. degree. Candidates in B.E. (Mining) or B.E. (Metallurgical) may offer Geology in lieu of Applied Mathematics. The complete range of subjects for the professional examinations which are taken when the Intermediate Examination is completed, and particulars of the practical experience necessary before the degree is conferred, are set out in Appendix 2.

(2) THE SPECIAL SCHOOLS OF ENGINEERING

25. Instruction for the professional examinations is given in three special schools of the University of New Zealand. These special schools are attached—one to the University of Otago, one to Canterbury University College, and one to Auckland University College.

(a) THE OTAGO SCHOOL OF MINES

26. The special school in Engineering at the University of Otago is not only the oldest school of engineering, but the oldest University special school in this country. When the University of Otago was founded in 1871 provision was made for four Chairs. For one of these, a Chair in Natural Science, preference was to be given, other things being equal, to a candidate able to teach Chemistry and Mineralogy, and the application of these sciences to Agriculture and Mining. It so happened that the University Council found a person with the somewhat varied qualifications required, and a School of Mines developed at once under his capable guidance. Since that date, in spite of considerable financial difficulties from time to time, the Otago School of Mines has built up a reputation as enviable as the National School of Engineering in Christchurch. The Otago school specializes in the Mining and Metallurgical branches of the B.E. degree, being the only school in this country offering complete courses in these branches. It also offers a course leading to the Associateship of the Otago School of Mines.