

... ENGINEERING

Message From The Dean

"It is a pleasure again this year to see the students in the Faculty of Engineering producing an issue of the Brunswickan as part of the program of 'Engineering Week'. I congratulate them on the continued excellence of their edition and thank them for the opportunity afforded me to address a few remarks to the University generally. This year, in contrast to previous occasions, I have prepared a short history of Engineering at this University and hope that it may be of some interest to all readers of this edition:—

Instruction in Engineering at Canada's oldest University began as the result of the foresight of two men, William Brydone-Jack and Sir Edmund Head. Brydone-Jack was appointed as Professor of Mathematics and Astronomy in 1840 and served as President from 1861 to 1885. Sir Edmund Head was Governor of New Brunswick from 1847 to 1854 and Governor-General of Canada from 1854 to 1861. These men had the foresight to appreciate the significance of the technological developments of their times and their place in an academic institution. Together, they guided the institution, known until 1859 as King's College, through the most critical years of its existence. They opposed the conservative policies and classical traditions which had developed under the first President of the College who, in his Eneacnaean address of 1851 stated:

"In a thinly populated and comparatively uncultivated country, no means which could be employed would have the effect of filling the College with agricultural, manufacturing, mechanical, or commercial students. The attempt could have no better effect than miserable, disheartening, self-destructive disappointment. Intellectual and moral culture should be our pursuit and occupation."

Even before this time, Brydone-Jack had been giving lectures in surveying as part of the mathematics course and was responsible for the construction, in 1851, of an Observatory which boasted a six-inch telescope and was the equal of any on the continent. In 1852 Sir Edmund Head petitioned the Council of the College to consider giving specific attention to Civil Engineering. As a result, Mr. Creagan, an English engineer who was conducting a survey of the European and North American Railway to connect Halifax with Portland, gave his first lecture on February 15th, 1854 to a class of twenty-six students; the first engineering instruction at a Canadian University. In these early years, the curriculum was heavily charged with preparation for the construction of railways.

With the transition from King's College to the University of New Brunswick in 1859, a diploma was established for the course in "Civil Engineering and Surveying" and was first awarded in 1862 to George Ketchum who, during his professional career made the first study of the Chignecto Canal. While a course in Science was established in 1871,

instruction to engineering students was given primarily by the Arts Faculty, with the professional subjects given by practising engineers. The number of graduates in any year was usually not greater than five or six.

The first staff appointments to recognize the separate existence of engineering was made in 1889 with the establishment of a Chair of Civil Engineering and Surveying, and the appointment of Mr. Allen Wilmot Strong as the first Professor. At the same time Dr. Wilmar Duff was appointed to a new Chair of Experimental Science. He was succeeded in 1893 by George M. Downing, B.Sc., an electrical engineer educated in the United States, who was appointed as Professor of Physics and Electrical Engineering.

The decade prior to 1900 is marked by an awakening of the necessity of expansion in engineering instruction, agitation for the purchase of equipment which the University could not afford and frustration of the staff, which changed frequently. The unrest of this period resulted in the establishment and awarding of the first degree in 1899 and the completion of an engineering building in 1901. Registration increased considerably following these favourable developments and it can be said that engineering education as we now understand it stems from them.

The first degree was designated by B.A.I. but this was changed to B.Sc. (in Civil and Electrical Engineering) in the year 1907. The following year, John Stephens, a graduate of Trinity College, Dublin, was appointed as Professor of Mechanical Engineering. His unique personality was appreciated by generations of students until his retirement in 1945. A. Foster Baird was appointed as Professor of Physics and Electrical Engineering in 1916 and continued as Professor of Electrical Engineering from 1927 until his retirement in 1957. There can be no doubt that John Stephens, Foster Baird and Earle Turner were the founders of the modern engineering Faculty at the University of New Brunswick. Single-handedly they built up and maintained their separate departments through the lean years of the depression and into the hectic years of World War II. During this period, Electrical Engineering acquired separate facilities in the World War I Memorial Building (opened in 1924) but this was the only physical expansion.

After World War II, the veterans quadrupled our registration. Further expansion was necessary in physical plant and the staff grew rapidly. Following the veteran bulge in registration it was decided to extend the course to five years after Junior Matriculation, and to offer a degree course in Mechanical Engineering. At the same time affiliations were arranged with a number of other universities with respect to offering the first three years of instruction in Chemical and Mining Engineering. The first class from the five



DEAN J. O. DINEEN

year curriculum graduated in 1952 and the first degrees in Mechanical Engineering were conferred in 1953.

The past ten years have been a period of steady growth marked by a large extension to the Engineering Building in 1957, and the beginnings and rapid growth of graduate studies, further increase in staff, increased support by the University and Industry, rapid improvement of laboratory facilities and equipment and finally by the institution of degree courses in Chemical and Surveying Engineering, with the first graduates in 1962. The Surveying course is unique at English-speaking Canadian universities.

Against this background of an early start, painfully slow progress during the Nineteenth century, gradual development under the leadership of capable, dedicated men during the first half of this century and accelerating expansion since World War II the Faculty of Engineering at the University of New Brunswick faces the future with confidence.

J. O. DINEEN
DEAN OF ENGINEERING

Engineer's Poet

Her That I Loved

Last night I embraced
My girl of the street,
When I caressed
Her playful thighs
A joy flickered
In those limbs of sin,
Of course it was then
I stole the heart
Of that capricious girl,
Entwined in her cobweb hair
She lulled me to sleep.

Oh, I have lost a dream
To discover that rude dawn
Has softly stolen her away;
O empty the heart
O empty the purse
That under pillow lay.

LEROY JOHNSON, E4

New Field For Graduates

This year for the first time on the U.N.B. campus, Chartered Accounting firms have been trying to recruit engineering graduates. This trend was started in Ontario only a short time ago and one large firm took on over 20 engineers. These engineers are trained through an accelerated three year program, available in Ontario and Quebec, to become Chartered Accountants.

Opportunities are for every branch of engineering and to his understanding of production, the engineer-accountant gets an immediate insight into business not offered by other careers. Far from being the fellow with a green eye-shade toiling over a desk in a dark corner, the modern public accountant is a professional man actively engaged in advising management on a wide variety of technical and financial

problems. He has better than average lifetime earnings and the engineer-accountant has a big boost on the road to high management positions.

The starting salaries are between \$350 and \$400 a month, as compared to about \$450 for a starting engineer. Along with this the courses, which are taken either at night school or correspondence, and the registration fees to the Institute of Chartered Accountants, are paid for in whole or in part by the firm.

This year the active recruiting by a wide variety of firms the Chartered Accountants went almost unnoticed by the engineers. However, since by 1970 the Accounting firms hope to be accepting only university graduates to train as C. A.'s more will undoubtedly be heard from them.

Hold Your Heads

Even though we come from what may be considered a small backwoods school by some people, the majority of the informed population realize that even if the town is dull and boring the campus is very much alive. It is normally very difficult to judge which is the best university or the second best, the only way that this can really be done is by a survey of the graduates, but in this survey the personalities of the persons involved play too great a role to make any estimate accurate. However in talking to quite a few persons who make it their business to know about colleges, it is very encouraging to learn just how well we are thought of. The electrical and civil departments were mentioned especially, with much praise for the up and coming surveying and chemical departments, the mechanicals are held in high regard.

This caliber of education which we are credited may seem strange to you when you hear about the fantastic number of failures at such places like McGill. This can be attributed to two very important differences in the universities. The minor being the size of the school and the size of the town, it is definitely not impressive to listen to a lecture over a loud speaker in another room, and this is the case in the large classes at the large schools, have you ever tried to study in Montreal, think about it, that is the advantage of Fredericton, there is nothing much to

do but study so you might as well.

The major reason for our high quality with low quantity is the point of view with which our professors look upon us. In the large Universities if a fellow gets 49 the administration will say "He didn't meet our standards, throw him out" and that's that. But here the administration and faculty ask themselves, not whether to lower the standards to let this fellow get through, but how can they help him rise to meet their standards. This is the important point, do not check the precision only at the end of the assembly line but check it all along the way and give a little push if the accuracy starts to drop off. If you wanted to see the Dean at McGill about your low Christmas marks you would have to make an appointment for April. When one learns about the severity of the regulations at other institutions of learning, one appreciates the reasonable and considerate outlook held by the staff. You would be surprised indeed to learn what a difference this relationship makes in the faculty, their idea is not to do the least that they can for us, but the most.

The credit for this achievement of high graduate caliber without a cut-throat attitude rests solely with the dean, his staff, and the policy of the university. So when you leave this University you can hold your head high and consider yourself one of the top ... when you graduate.

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