

## Dean's message

The Engineering Week program, organized by the Engineering Undergraduate Society, will form a part of the extra-curricular activities of the Fall term. A new feature of the program this year is a competition between the students of each Department in the preparation of displays illustrating some phase of their branch of Engineering. Increasing emphasis is also being placed on the use of Engineering Week as an extension of the Freshman Orientation program to introduce First Year students to the general concepts and particular emphasis of the various branches of the profession. It is hoped that the members of the Society will fully support their Executive in carrying out an effective and well organized program during the week and that the First Year students will take advantage of the opportunities for the broadening of their knowledge which it affords. In particular, I heartily recommend "Open House" which will provide many specific examples of the type of work in which the students of the various Departments are engaged.

After several years of approximately constant undergraduate registration, it now seems certain that our numbers will increase considerably in the years immediately ahead. The Freshman class is the largest since the immediate post-war years and approximately 50% larger than that of recent years. Because we expect that this trend is likely to continue, enrolment in Engineering could increase to a thousand students by 1968. In addition to these undergraduates, our facilities will be required to accommodate an increasing number of graduate students and meet their research needs. At the present time we have reached, in most Departments, the upper limit of the number of graduate students who can work at the graduate level.

To provide a very considerable increase in space for this Faculty and to make possible many badly needed improvements and additions to our facilities and services, planning is now in progress for an addition to the Engineering Building. Present objectives are for construction to begin in the spring of 1966 and occupancy to occur by September 1967.

Until this addition can be completed, it will be necessary to limit graduate registration to about its present level and to continue the improvisation and multi-use conditions which exist in many areas.

With the recently announced indications of industrial expansion and economic advancement in New Brunswick and an unprecedented demand for our graduates by Canadian industry generally, the development of a well-equipped facility for engineering instruction and research at this University becomes increasingly urgent. It is confidently expected that many of today's undergraduates will enjoy the benefits of this development before their graduation.

J. O. DINEEN, Dean

## Chokers

Overheard in the E.E. Lab:

'Take hold of that wire.'

'This one?'

'Feel anything?'

'Nope'

Then don't touch the other one. It's carrying 5000 volts.

An American girl, answering a loyalty questionnaire was asked: 'Can you explain your sojourns in other countries?'

Her eyes flashed with anger as she answered: 'I once attended the University of Heidelberg. Does that make me a German? I spent six months as an art student in Russia. Does that make me a communist? I even spent four in the Virgin Isles.'

The Editor has been requested to print 'The Engineering Spectacular' on softer paper.

The professor rapped on his desk and shouted: 'Gentlemen — order!'

The entire class yelled: 'BEER!'

The doctor was advising the new parents on the care of their first born.

'Remember', he said, 'boil everything before putting it in the baby's mouth.'

'Gosh honey,' said the new father, 'no wonder you insisted on putting Junior on a bottle.'

The sports car owner was giving his first ride in one of the low-slung models.

The friend appeared to be puzzled, so the driver asked what was wrong.

'I can't figure out what the long wall is that we have been passing.'

'That's no wall', snapped the driver, 'it's the curb'.



"SO MUCH DONE BY SO FEW FOR SO MANY"

## From the president

One of the principal objectives of our Engineering Week is to focus the attention of the entire campus on the Faculty of Engineering. It also serves another major purpose and that is to make engineers aware of themselves and their place in the society around them. All too often student engineers allow their identity as soon-to-be professionals to falter. There seems to be no distinctive pride in their chosen vocation or rather, there seems to be no willingness to work towards achieving any other than an individual goal.

Could it be that these students are not aware of where their education is leading them or what being an Engineer means? Do they know that Engineering is a very youthful profession; that Engineering as we know it started only about 350 years ago and that its evolution to the modern concept was so slow that over 80% of all the Engineers who ever lived are alive today.

Up to about the 17th century man was able to build rudimentary structures, bridges, and roads he knew a few principles and used his ingenuity to adapt these principles to his use. This was not, however, Engineering, because he didn't really understand his problem or try to analyze them.

Galileo was probably the first Engineer. He used cause and effect relationships to develop new theories and put them to work for the benefit of mankind. He realized essentially the same ideals as motivate our present day Engineering leaders.

One of the first Engineering schools was founded in 1792 at Paris. The Ecole Polytechnique that a four year program of training was required in order that a man could become a pro-

per Engineer. This school also established our present day system of lecture/laboratory study. At Ecole Polytechnique the student spent two years studying basic mathematics, physics, and chemistry and then studied two years at a school of Mines, Roads, or Bridges.

In those days only two real fields of Engineering were available; Military and Civil Engineering. Soon however, the advent of steam power stimulated manufacturing of all kinds and Civil Engineers specializing in machines became known as Mechanical Engineers. Later parallel developments in the electrical power field formed a basis for Electrical Engineering and alter again the demand for synthetic products and the discoveries made in pure chemistry allowed specializing in this area and the field of Chemical Engineering was born. As man's requirements and desires became more sophisticated the demands on Engineers forced more specialization and resulted in the large scale diversification of Engineering fields as we know them now.

Considerable progress has been made during the present century in formulating scientific principles and associating them with Engineering practise. Whereas formerly Engineering had been largely empirical and there was little inter-relationship of the various fields, soon these basic scientific fundamentals began to encompass all the various Engineering disciplines. Thus there arose a greater need for communication between Engineers, and so as dictated by these needs a parallel development of the "Engineering Society" took place.

This movement towards organized Societies has brought all Engineers, both professional and undergraduate together as

a great fellowship in scores of organized branches. The concept of organized societies was established, not to foster an exclusive "caste" of Engineers, but rather to bring about a medium for social and professional association. A wide publication and free exchange of technical experience was called for and, more important, a program to encourage young Engineers and students was to be actively followed. And finally much emphasis was placed on social comradeship as an aid to technical and professional relationships. These ideals are essentially the same ideals to which all organized Engineering Societies accrue but the most important concept of all is the concept of voluntary participation.

The word "voluntary" is defined as any act or performance not compelled or imposed by another. The "voluntary concept" is exemplified by all the great works of art, literature and music; by the great scientific and medical discoveries; by the great development of legal and governmental systems; in all ages and by all civilizations. All of these things came about by the conception of ideas and the voluntary application of these ideas either by individuals or by associations of individuals.

All organized societies such as our own Engineering Undergraduate Society, have flourished only to the extent that individual members have contributed — not only as ordinary members but in the active creating of new ideas and in the pursuance of the outcome of these ideas. Voluntary work is the underlying force in all organized societies. It is this voluntary concept which leads to the greatest achievement and greatest enjoyment of the society.

Active participation in his Engineering Society can lead to material development of the individual since as he contributes his ability to contribute grows. When a realization of the role of his Society in his career is attained, the individual member has reached the most effective portion in the development of his maturity and character.

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