

## Medical engineering program established

By SUSAN MILLER

The UNB Bio-Engineering Institute has entered into an agreement with the Hospital Services Division of the Department of Health through which they plan to initiate a Medical Engineering Program. Such a service would assist New Brunswick hospitals in the selection, installation, operation and maintenance of electronic biomedical equipment.

The idea for the program originated in the fall of 1968 when R.N. Scott, Executive Director of the Institute, approached the Department of Health and offered the Institute's services. "I felt we had a number of qualified persons on staff, and could initiate such a service project with less expense than the government's hiring an expert and starting from scratch", explained Scott.

Biomedical research is not involved in this program. "A NB hospital requires advice and assistance in the medical engineering field, not an expensive research laboratory" said Scott. "No one on the regular hospital staff is experienced in working with new and sophisticated electronic instruments."

The problems encountered by a hospital in dealing with new equipment are many, and they begin right in the planning stages. There seems to be no general agreement on the amount of current to which the human body can be safely subjected. This leads to such considerations as whether each patient's room should have its own isolated power source, and whether each piece of equipment in an operating room should be grounded by a separate wire. These considerations can lead to decisions both expensive and impractical, unless some kind of economic compromise between too much and not enough charge can be reached.

"Another problem," said Scott "is in the selection of which piece of equipment to purchase. When a hospital administrator has no experience in this field, the decision on which of several types to choose from will be difficult. Here the knowledge of an electrical engineer can be quite useful."

Once a piece of equipment has arrived, it must be set up, calibrated and tested. Although some

manufacturers provide training sessions for the staff, others have been known to send the equipment without even a service manual. Many hospitals do not have the instruments required to test equipment for possible defects (of which there are usually many). Scott indicated that "...we'd like a standard clause in each purchase contract to the effect that service manuals must accompany the equipment."

When several pieces of monitoring equipment are used on one person simultaneously, the problem of incompatibility among the instruments from different manufacturers arises. "An engineer can check the equipment and decide if such a combination would be safe. The necessity of using all of the instruments may be questioned. The patient's condition may not require the monitoring of certain systems," said Scott.

Thus the medical engineering program places heavy emphasis on safety, and will initiate an educational program on all aspects of electrical safety in a hospital, from heating plants to operation room equipment. This includes a safety check on all electrical services and instruments in the hospital.

Procedures for the coordination of all biomedical equipment will be initiated as well. The equipment will be checked as it arrives in each hospital, and be subject to continuous inspection and calibration. Since the Institute has no people fully experienced in the operation of X-ray equipment and the running of clinical testing

labs, they will not deal with these fields.

The program employs two full-time engineers, the equivalent of one full-time engineer from the staff, and four part-time staff members. Graduate students of electrical engineering will accompany this team as they travel to the hospitals testing the equipment.

This program of service and consultation is planned over a five-year period. "After this, it is hoped that the hospitals will have begun medical engineering departments of their own, and the University will move back into a coordinating role," said Scott.



Photo by Ken De Freitas

Twenty year old Caroline Caskey, a Nursing student named Miss Engineering, was crowned Carnival Queen Wednesday night by last year's winner Linda Baker. Miss Caskey received a bouquet of roses and an engraved tray.

## OFY offered again this summer

By GARY CAMERON

Opportunities for Youth, a government program to employ young people in the summer time, will be accepting applications for projects until March 1, 1973. The program will have a budget of \$39,970,000 and will employ 33,834.

This year's program will feature more funds, more activities, increased earnings and longer duration of projects as compared to 1972. Other aims are to employ more low income youth and increase participation in northern Canada.

Youth are encouraged to investigate and identify the major needs of their local communities and propose projects to meet these needs. They are cautioned, however, that these projects should not duplicate or disrupt local programmes.

Some examples of last year's projects are a bilingual legal aid service, an Indian culture and heritage (library), an experiment with new traffic lights, an urban vehicle design project, a medical aid and referral centre for persons suspecting they had contracted venereal disease, and a playground built with an oriental flair in Toronto. This year, OFY will also include several national projects as well as a limited number of projects with a business orient-

ation.

Projects should be of positive benefit to the community, meeting some of the needs of the community or Canadian society, and offering realistic answers to community problems. It should also show evidence of local support.

Projects should be planned, administered and evaluated by young people themselves. As many participants as possible should take part in the planning and preparation of the application. Applicants are encouraged to seek assistance and advice from specialists, other organizations or OFY project officers; but they must assume full responsibility for the operation of the project selected.

Preference will be given to projects submitted by young people who need assistance in financing their education, who are members of low income groups, ethnic or racial minorities, native peoples, handicapped, or youth who are from isolated communities, etcetera.

Projects applicants are en-



couraged to submit ideas which offer new services to the community or new approaches to existing services. Applicants should demonstrate the ability to complete their project, taking into account available human resources, knowledge and time.

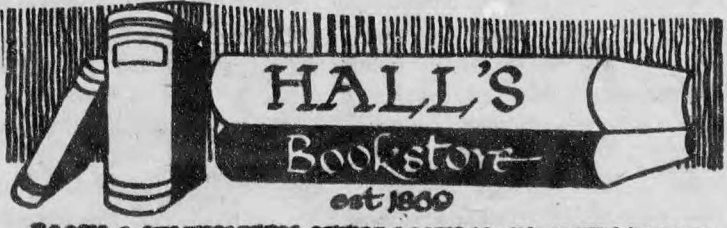
Salaries range up to \$70.00 per week for secondary students and \$90.00 per week for post-secondary students. Projects may be funded up to 16 weeks. The purchase of capital goods is not permitted.

Assistance and applications may be obtained (in NB) from Terminal Plaza, 1222 Main Street, Moncton, NB. Phone: 858-2134.

Applicants must submit detailed application forms, sign contracts, keep accurate financial records (which will be audited), complete necessary questionnaires and submit a final report on their activities. An OFY supervisor monitors the group. Applicants from this area may find that assistance from federal MP J. Robert Howie may come in handy.

  
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