ments follow nearly the same course. In the second year the lecture
and laboratory courses differ slightly.

The subjects of the Part II course are as follows:

- Circuit Theory
- Electronics I (Transistor Circuits)
- Control
- Electronics II (Communications)
- Electrical Materials
- Mathematics
- Electromagnetism

All students undertake a design-project as part of the practical course.
In the final year of the course the student may combine subjects
from a wide choice to cover such fields of interest as communications,
computers, control, etc.

The subjects for the field chosen for the Part III course are selected
from the following list:

- Aerials and Radar
- Communications
- Computer Electronics
- Control
- Electronic Devices
- Feedback
- Mathematics
- Microelectronics
- Microwaves
- Pulse Techniques
- System Analysis
- Semiconductor Technology

plus such other subjects as may from time to time be considered
suitable.

All students must undertake an individual piece of work which may
take the form of a dissertation, a design- or a research-project.

POSTGRADUATE ACTIVITIES

The Department has at present three postgraduate courses leading to
the degree of Master of Science. For further details see page 10.

RESEARCH. See page 10.

INSTITUTE OF SOUND AND VIBRATION

Professor of Vibration Studies:


Professor of Applied Acoustics:

J. B. Large, B.Sc., M.S.

The Professors are assisted by a teaching staff of twelve. The Depart-
ment is responsible for the undergraduate course of Engineering
Science. The Institute has always been closely concerned with the first
degree courses in the Faculty. Its academic staff have taught at all levels
the undergraduates of other departments. The present annual intake of
undergraduates is 20 and the total number of undergraduates about 50. There are 64 postgraduate students and research assistants and 51 research Fellows and junior research Fellows.

The Part I course is essentially the same as that for all other engineering students. The major difference is due to the theoretical and practical subject known as Experimental Physics.

The subjects for the Part II course for the degree of Bachelor of Science are:

Applied Electronics  Human Factors in Engineering
Computation  Mathematics
Control  Mechanics of Fluids and Solids

together with one subject chosen from

Chemistry and Nuclear Power
Electromagnetism
Properties and Mechanics of Materials
Thermodynamics

The Part III course consists of five subjects chosen from the following:

Acoustics and Vibration  Mechanics of Fluids and Solids
Aerodynamics B *Mechanics of Materials
Control *Properties of Materials
Human Factors in Engineering *Nuclear Power
Industry and Society *Thermodynamics
Mathematics

All students must undertake an individual piece of work which may take the form of a dissertation, a design- or a research-project.

Postgraduate Activities

The Institute has at the present time three postgraduate courses of twelve months' duration leading to the degree of Master of Science. These one-year post-graduate courses are in:

(i) Vibration and Noise Studies
(ii) Advanced Acoustics
(iii) Environmental and Human Factors in Engineering.

The Institute is very actively engaged in many areas of research,

* These subjects can only be selected if the appropriate Part II course has been completed.
not only in the form of pure research, but also in much applied research in the field. Noise and vibration problems are of increasing importance.

Among the Institute's well-equipped laboratories are the Rayleigh Building, the Sir George Edwards Vibration Laboratory and the Westland Acoustics Laboratory. Extensive facilities exist for clinical and physical audiology and for computation. The Institute has a large anechoic room, two reverberant rooms, an audiology laboratory and engine noise test cells.

Some of the principal research fields are in helicopter and hovercraft noise, acoustic fatigue, aerodynamic noise, noise and vibration in nuclear power station heat exchangers, building vibration, vibration and damping of aircraft structures, assisted resonance, noise and vibration of rotating machinery, community noise control, clinical audiology, sonic booms and impulse noise and vehicle noise and vibration.

DEPARTMENT OF MATHEMATICS. See also page 14.

Students entering on a course leading to a first degree in Engineering Mathematics in the Faculty of Engineering and Applied Science follow the usual pattern of Part I, Part II and Part III. The subjects for the Part I of the course consist of a number of Mathematics courses together with courses in Engineering Design, Electricity, Thermodynamics and some laboratory work.

The subjects of the Part II course are as follows:

Applied mathematics, mechanics of continuous media, statistics, operational research and experimental design, numerical methods, electronics and communication theory. The students will pursue an appropriate laboratory course.

The Part III course consists of half-year courses chosen from:

Differential equations, vibration theory, partial differential equations, continuum theory, management science, systems engineering, numerical methods, theory of computers.

In addition, all students must undertake an individual project.

POSTGRADUATE ACTIVITIES. See also page 15.

It must be emphasized that modern engineering research tends to be highly mathematical and that close collaboration exists between the Mathematics Department and the other departments in the Faculty.

A student with a good first degree in Mathematics (science or