

Biomedical Engineer



Health
South Western Sydney
Local Health District

What is a Biomedical Engineer?

Biomedical Engineering is the application of engineering techniques and thinking to the prevention, diagnosis and treatment of human disease.

In practice in the health system this can involve working in specialist departments in close cooperation with other health professionals or working in the Department of Biomedical Engineering with other Biomedical Engineers and Technicians.

Roles of a Biomedical Engineer

- Calibrating and commissioning of all types of medical equipment and systems including; Patient Monitors, Defibrillators, ECG machines, X-ray units, CTs, and MRIs
- Providing advice and support during selection and evaluation of new equipment
- Ensuring safety of patients, staff and the general public
- Research and Development - developing improved equipment for delivering care
- Teaching - other engineers and technician and other hospital staff, both specific and general
- Teaching

Career Opportunities

Initially you will be employed in a position where you will be given time and resources to undertake extensive on the job training or further study. Progression to a senior or management position, where significant independence and responsibility are involved, will occur following attainment of CPEng status or similar experience. When you have significant experience in the field you will be able to apply for director positions.

Qualifications Required

To obtain an initial position in the field, a bachelors degree in engineering is required. This is then followed by on the job training in your particular field. Many biomedical engineers will then also complete postgraduate qualifications (Masters or Business) part time while working. Engineers Australia offers advanced levels of membership that indicate a high level of professional attainment. The level of Chartered Profession Engineer can be achieved by those who have had sufficient on the job training and experience, approximately 5 years after graduation. The attainment of Chartered membership is recognition that you have enough knowledge and experience to take on significant responsibility in a department.

Supervision Provided

Extensive supervision and training is provided in the initial years to ensure that you have the required skills and knowledge. As these skills and knowledge are developed independence in the completion of set tasks is expected, although always with appropriate peer verification. You will also participate in supervising others in the completion of projects.

What sort of person should I be

- A logical thinker
- Interested in the application of physics and mathematics
- Enjoy working with computers and sophisticated pieces of equipment
- Good at problem solving
- Good at seeing new ways of doing things

Personal skills required of a Biomedical Engineer

- Able to interact well with others
- Able to work independently
- Able to make decisions in an appropriate and efficient manner
- Well organised