



Biomedical

Biomedical engineers apply engineering and scientific methods to find solutions to problems in medicine and the life sciences.

Biomedical engineers may perform the following tasks:

- Design new medical monitoring, diagnostic and therapeutic equipment
- Set up and maintain biomedical equipment
- Specify equipment for particular purposes
- Test the safety, efficiency and effectiveness of equipment
- Plan data processing services and the development of associated computing programs
- Analyse new medical procedures to forecast likely outcomes
- Participate in medical or scientific procedures where biomedical skills are needed
- Design and deliver technology to assist people with disabilities
- Analyse and design prosthetic and orthotic devices
- Measure and monitor physiological systems
- Diagnose and interpret bioelectric data using signal processing techniques
- Provide computer analysis of patient-related data
- Design and develop equipment for medical imaging to display anatomical detail or physiological function.

Specialisations:

Bio-engineer

A bio-engineer applies engineering principles to the study of biological systems and processes.

Clinical Engineer

A clinical engineer researches, develops and maintains instruments and equipment to aid clinical staff.

Rehabilitation Engineer

A rehabilitation engineer deals with systems and devices which improve the quality of life of people with disabilities.

Biomedical engineers work in health care and must have a good theoretical and practical knowledge of engineering, a sound understanding of medical sciences and the ability to combine the two.

Biomedical engineers usually work in multidisciplinary teams with other professionals including anaesthetists, surgeons, physiotherapists, occupational and speech therapists and other medical specialists.

Personal Requirements:

- Good communication skills
- Able to observe and measure accurately
- Patience and imagination
- Good at design
- Analytical and problem-solving skills.

Source: Job Guide 2011