

HTI 5134 Rehabilitation Engineering Credit Value: 3

Responsible Staff and Department(s): Dr. Eric Tam (HTI) & Dr. Aaron K.L. Leung (HTI)

Pre-requisites: HTI 3115 Electrical Technology II-Electronics;
HTI 3141 Orthopaedics, Traumatology and Rehabilitation; or equivalent

Recommended Background Knowledge: Knowledge of basic engineering/physics or Human anatomy and Physiology

Learning Approach: There will be lectures, seminar as well as laboratory sessions.

Learning Outcomes:

This subject aims to provide students a good background on current engineering solutions and their limitations for persons who suffer from physical or sensory impairments. This knowledge will enhance the students' ability to provide quality of care to the people with disabilities through the provision of appropriate rehabilitation engineering devices.

Syllabus:

This subject is concerned with the application of engineering solutions for people with disabilities. Rehabilitation is multi-disciplinary in nature and the team approach is the preferred clinical approach in the provision of rehabilitation engineering devices. The ideal team consists of medical and health professionals and rehabilitation engineers. This subject is appropriate for professionals concerned with rehabilitation.

The contents of this subject covers:

- Augmentative and Alternative Communication Devices
- Sensory Aids for Hearing and Visual Impairments
- Seating and Mobility Devices
- Prosthetics and Orthotics Technology
- Evaluation and Training Technology
- CAD/CAM Application in Rehabilitation
- Human-Machine Interface and Universal Design
- Emerging Technologies