

## SUBJECT DESCRIPTION FORM

SUBJECT CODE: HTI2151

SUBJECT TITLE: Introduction to Health Technology

CREDIT VALUE: 2 credits

PRE-REQUISITES: Nil

RESPONSIBLE DEPARTMENT: HTI

RESPONSIBLE ACADEMIC STAFF: Dr. Thomas Lee  
Other HTI Academic Staff

CONTACT HOURS: Seminars plus Visits 28 hours

### LEARNING OUTCOMES:

At the end of the subject, students are expected to be able to:

- 1 Describe the wide scope of health technology and illustrate the field with examples
- 2 Understand the interdisciplinary nature of the many health care problems facing us today
- 3 Illustrate with examples how health care problems can be tackled through multidisciplinary team efforts involving clinicians and engineers
- 4 Appreciate the opportunities and the working environments associated with medical devices and diagnostics

### SYLLABUS:

Technology and Health Care, Biomechanics, Human Movement Analysis, Electrophysiological Measurements, Prosthetics and Orthotics, Biomedical Imaging, Biomedical Transports, Biomaterials and Tissue Engineering, Rehabilitation Engineering, Biosensors, Intellectual Property, Standards, and Governmental Regulations, Industrial and Clinical Environment.

TEACHING & LEARNING APPROACH: Seminars  
Interactive Q/A  
Reflective Worksheets  
Lab Visits  
Individual Project  
Team Project

ASSESSMENTS: 100% Continuous Assessment  
- Class Participation  
- Reflective Worksheets  
- Individual Project  
- Team Project Assignment  
- Team Project Presentation

REFERENCES:

1. Akay M, Wiley Encyclopedia of Biomedical Engineering, Wiley, 2006.
2. Wnek GE and Bowlin GL, Encyclopedia of Biomaterials and Biomedical Engineering, Marcel Dekker, 2004.
3. Bronzino JD, The Biomedical Engineering Handbook, CRC Press, 2000.
4. Shurr DG and Cook TM, Prosthetics & Orthotics, Appleton & Lange, 1990.
5. Selected articles in popular science and engineering magazines.
6. Selected internet sites.