



Universiteit van Pretoria Jaarboek 2017

Bioelektrisiteit en -elektronika 732 (EBE 732)

Kwalifikasie	Nagraads
Fakulteit	Fakulteit Ingenieurswese, Bou-omgewing en Inligtingtegnologie
Modulekrediete	32.00
Programme	BlngHons Bio-ingenieurswese
Voorvereistes	Geen voorvereistes.
Kontaktyd	32 kontakure per semester
Onderrigtaal	Module word in Engels aangebied
Akademiese organisasie	Elektriese, Elektroniese en Re
Aanbiedingstydperk	Semester 1

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

This module focuses on electrophysiology, using a quantitative approach. Topics covered in the first part of the module are: electrical properties of the nerve cell membrane, action potentials and the Hodgkin-Huxley model, cable theory, the neuromuscular junction, and extracellular fields. The second part of the module builds on this background to discuss the theory and practice of electrical nerve stimulation. Applications of the theoretical work is discussed, including functional electrical stimulation (e.g. electrostimulation used for standing and walking in paraplegics), and cochlear implants for the deaf.

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Die inligting wat hier verskyn, is onderhewig aan verandering en kan na die publikasie van hierdie inligting gewysig word.. Die [Algemene Regulasies \(G Regulasies\)](#) is op alle fakulteite van die Universiteit van Pretoria van toepassing. Dit word vereis dat elke student volkome vertrouwd met hierdie regulasies sowel as met die inligting vervat in die [Algemene Reëls](#) sal wees. Onkunde betreffende hierdie regulasies en reëls sal nie as 'n verskoning by oortreding daarvan aangebied kan word nie.