



Universiteit van Pretoria Jaarboek 2017

Analoog elektroniese ontwerp 732 (EME 732)

Kwalifikasie	Nagraads
Fakulteit	Fakulteit Ingenieurswese, Bou-omgewing en Inligtingtegnologie
Modulekrediete	32.00
Programme	BIngHons Mikroëlektroniese Ingenieurswese
Voorvereistes	Analoog elektroniese ontwerp EME732 (E5), 3de jaar Elektronika of gelykstaande of toestemming van die lektor.
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.

The integrated circuit (IC) or “chip” is the motor of the present electronic revolution. The ever-increasing impact of electronics is driven mainly by large-scale ICs such as processor and memory chips. The electronic circuit techniques used in these chips can only be understood on a deep level by a study of classical analogue electronics aimed at integrated circuit design for fabrication in CMOS, bipolar and BiCMOS processes. In addition, analog circuit techniques perform an essential role in the interfaces between the “real world” and digital systems. Examples are: voltage references, amplifiers, filters, level-converters, buffers. Important topics in this respect are feedback and stability theory as specialized for electronic circuits. The course includes: IC fabrication technology, models for IC transistors, transistor current sources and amplifiers, output stages, operational amplifiers, frequency response and stability of feedback amplifiers, nonlinear and computational circuits.

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.