University of Pretoria Yearbook 2016

Reactor physics 784 (MUA 784)

Qualification	Postgraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	16.00
Prerequisites	MUA 783 Reactor engineering science 783#
Contact time	21 contact hours per semester
Language of tuition	English
Academic organisation	Mechanical and Aeronautical En
Period of presentation	Semester 1

Module content

Probability concepts and nuclear cross sections, multiplication factor and neutron flux, slowing-down process in the infinite medium, diffusion theory the homogeneous one-velocity reactor, Fermi age theory: the homogeneous multi-velocity reactor, transport theory, reflected reactors, reactor kinetics, heterogeneous reactors, control-rod theory.