University of Pretoria Yearbook 2016

Nuclear reactor materials 700 (NNR 700)

Qualification	Postgraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	32.00
Programmes	BEngHons Metallurgical Engineering
	BScHons Applied Science Applied Science: Metallurgy
Prerequisites	No prerequisites.
Contact time	10 lectures per week
Language of tuition	English
Academic organisation	Materials Science and Metallur
Period of presentation	Year

Module content

In this module the mechanical behaviour of metals and alloys at room and high temperature is addressed but with special emphasis on nuclear materials used in commercial power reactors. In particular these materials' behaviour under deformation, creep, fracture, fatigue and also corrosion in irradiation conditions for in-core materials as well as their behaviour under the unique environmental conditions for out-of-core materials is covered.