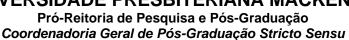


UNIVERSIDADE PRESBITERIANA MACKENZIE





Course Syllabus

Department/Faculty: School of Engineering Graduate Program: Materials Engineering and Nanotechnology			
Course Name: Solid State Physics			
Professor:			
Office hours: 48			
Course Overview:			
	nd nanostructures. Introd	science. Study of the thermal and electron to semiclassical and quantum mode	
Topics outline:			

- 1. Crystal structure and reciprocal lattice
- 2. Lattice vibrations (phonons)
- 3. Drude and Sommerfeld theories of metals
- 4. Band structure
- 5. Electron dynamics
- 6. Semiconductors

Letter Grade Assignment:

Grade A (Excellent) - Grade points between 9 and 10

Grade B (Good) - Grade points between 8 and 8.9

Grade C (Satisfactory) - Grade points between 7 and 7.9

Grade D (Unsatisfactory) - Grade points between 0 and 6.9

Texts, Materials, and supplies:

Basic Bibliography:

- KITTEL, Charles. Introduction to Solid State Physics. São Paulo: LTC, 2016. (Portuguese edition)
- REZENDE, Sérgio M. Materiais e Dispositivos Eletrônicos. São Paulo: Livraria da Física, 2015. (in Portuguese)
- SIMON, Steven H. The Oxford Solid State Basics. Oxford: Oxford University Press, 2013.

Supplementary Bibliography:

- FOX, Mark. Optical Properties of Solids. Oxford: Oxford University Press, 2001.
- BLUNDELL, Stephen. Magnetism in Condensed Matter. Oxford: Oxford University Press.
- SINGLETON, John. Band Theory and Electronic Properties of Solids. Oxford: Oxford University Press, 2001.
- ASHCROFT, N. W.; MERMIN, N. D. Solid State Physics. Belmont: Brooks Cole, 1976.