

University of Pretoria Yearbook 2016

Applied theory of sampling for minerals processing 701 (NMP 701)

Qualification Postgraduate Faculty of Engineering, Built Environment and Information Technology **Faculty** Module credits 32.00 **Programmes** BEngHons Metallurgical Engineering BScHons Applied Science Applied Science: Metallurgy **Prerequisites** No prerequisites. Contact time 48 contact hours per semester Language of tuition English Academic organisation Materials Science and Metallur

Period of presentation Year

Module content

This module covers both the theory and practice of sampling, primarily with respect to the minerals processing industry. As sampling is statistical in nature, basic statistics relevant to sampling theory will be considered. The module will then focus on the theory of sampling with specific reference to managing large and small scale variability. The effect of interpolation errors, periodic errors and increment weighting errors will be considered under large scale variability. Under small scale variability the determination and management of various errors that result in small scale variability will be covered, as well as the compilation of sampling protocols that can minimise these errors. The module will also examine the evaluation of dry and wet sampling equipment with respect to the different bias generators, as well as the implementation of sampling protocols in practice. Ore types covered during the course include coal, iron ore, gold and platinum.

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