

University of Pretoria Yearbook 2020

Engineering economics 420 (BIE 420)

Qualification	Undergraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	8.00
Programmes	BEng Industrial Engineering BEng Industrial Engineering ENGAGE
Prerequisites	No prerequisites.
Contact time	1 discussion class per week, 2 lectures per week
Language of tuition	Separate classes for Afrikaans and English
Department	Industrial and Systems Engineering
Period of presentation	Semester 2

Module content

Money-time relationships and equivalence (interest formulae, effective interest rate, bonds and loans). Bases for comparison of alternatives (present worth, annual worth, Internal rate of return, external rate of return, investment balance diagrams, Decision making among alternatives (useful lives equal to study period, useful lives different among alternatives, mutually exclusive alternatives in terms of combinations of proposals). The influence of inflation on engineering economic calculations. Decision making among alternatives on an after-tax basis. Replacement analysis (the economic life of an asset, retirement without replacement). Risk analysis of cash flows.

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