



University of Pretoria Yearbook 2021

Engineering economics 420 (BIE 420)

Qualification Undergraduate

Faculty [Faculty of Engineering, Built Environment and Information Technology](#)

Module credits 8.00

NQF Level 08

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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