

University of Pretoria Yearbook 2018

Decision analysis 880 (IBD 880)

Qualification	Postgraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	10.00
Programmes	MEng Technology and Innovation Management (Coursework) MSc Technology and Innovation Management (Coursework)
Prerequisites	No prerequisites.
Contact time	20 contact hours
Language of tuition	Module is presented in English
Department	Engineering and Technology Management
Period of presentation	Semester 1 or Semester 2

Module content

Techno-economics analysis (TEA), also referred to as economic feasibility studies, is a core technique which is used to support decision making in all for-profit organisations and sometimes more broadly in the public sector. The fundamental principle of the analysis is that only investments or projects which show a positive return on investment should be approved and implemented. Although stated simply, this principle is complex to apply since it changes according to the manner in which costs and income are accounted or measured. The simplest approaches use the generic models of net present values, discounted cash flows, internal rates of return and the time value of money to compare expenses against earnings. In this module, the student will be given an introduction to the principles of techno-economics and the structure of TEA. This introduction will be followed by material on the core calculations of TEA, including present value, future value and return. The students will be required to apply the initial TEA structure to a class project in order to acquire the basic knowledge with which such an analysis can be completed, and as a consequence, how to guide decisions relating to investment in future projects.

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