## TID7205: Value Engineering and Value Management

**Short description**

Value engineering is a structured process which seeks to remove unnecessary cost without impairing function (or value). Value management is a holistic process that seeks to understand and define what constitutes value within a project. This procedure does not set out to replicate the considerable body of knowledge related to this field. Value Management key outputs are a series of value objectives that must be achieved.

**Course objectives:**

To be able to relate the value engineering concept to cost, process, machinery and price, this will help students make decisions accordingly for a cost effective product

**Learning objectives:**

At the end of the course the student should be able to;

1. Be able to relate value engineering to costs, and its application to decision making.
2. Be able to use value engineering as an economic analysis tool.
3. Be able to apply SMART methodology in group decision environment.

**Methods of course delivery:**

1. lectures and discussions
2. self study assignments
3. case studies and group discussions

**Method of assessment**

Assessment will be done through coursework which will include assignments, class room and take home tests, project work and presentations and a written examination. Course work will carry a total of 40% and written examination carries 60%. Coursework marks will be divided into; Assignments 5%, Tests 10% and Practical Work 25%.

**Course content**

1. Definition of value engineering and how it relates to cost and function of a product, facility, process, Applications of value engineering as a decision support tool. (8 hours)
2. Value engineering as an economic analysis tool, the definition of value management and how it relates to the concept of utility. The differentiation between value engineering and value management. (8 hours)
3. Introduction to multi-criteria decision making and multi-criteria decision support tools. Description of multi-attribute utility theory and multi-attribute rating techniques. (8 hours)
4. Description of the simple multi-attribute rating technique (SMART) methodology for value management and how it relates to the concept of group decision support. (9 hours)
5. Application of SMART methodology in group design-decision environment. (12 hours)
6. Case Studies ( 15 hours)

**Basic reading list/references**

1. Connaughton, J. N. and Green, S. D. (1996) [*Value Management in Construction: A Client's Guide*](http://www.reading.ac.uk/pm/sg/abstracts/ciria.htm), Special Publication 129, CIRIA, London, 73 pgs. ISBN 0 86016 452 2.
2. Green, S. D. (1992) [*A SMART Methodology for Value Management*](http://www.reading.ac.uk/pm/sg/abstracts/ciob2.htm), Occasional Paper No. 53 Chartered Institute of Building, Ascot, 46+vi pgs. ISBN 1-85380-0554.