

MECH 497 VALUE ENGINEERING WORKSHOP (3 Credits) Jan. 2020

Professor: Prof. Paul Zsombor-Murray, ing., Lucie Parrot, ing., CVS (life),
Prof. Vince Thomson, Joe Slanik, ing.

Semester/Day/Time: Winter Mondays 13:30 - 21:30 hrs (8 sessions) MD267
(6 for industrial client)

Objectives: To learn the value engineering methodology
To learn how to manage value in projects
To obtain industry-related experience in applying value engineering methods

Pre-requisite: MECH 393 Machine Element Design

Course Description:

The McGill University Value Engineering Workshop is a 40-hour intensive course where five (or more) students are teamed with industry personnel in order to attempt to improve the value (defined as the ratio of benefit to cost) of a product, process or service of a sponsoring company. The workshop is led by a Certified Value Specialist, and the workshop is qualified by SAVE (the Society of American Value Engineers) as one which satisfies one of their workshop requirements for becoming a CVS.

The workshop consists of eight scheduled meetings, five of which are eight hours in length. In the first meeting in January, students are given an introduction to the course, prior to being assigned to teams, in a one-hour session (attendance is mandatory). The workshop session begins on the second week, and an evening meal is provided as part of the 1:30 to 9:30 p.m. meetings. The weekly meetings follow closely the five-step job plan of Larry Miles, the originator of Value Engineering, ending in the Presentation and Reporting Phase. A one-hour meeting by appointment is scheduled for each team to rehearse the final presentation on the seventh week. The final presentation is held the following week in a nearby hotel conference room with all of the sponsoring company participants and many of their management personnel in attendance. A *.pdf* file of the final report is due one week after the final presentation. Classes in the workshop are not cancelled should the university be closed on the day of the meeting. Instead, they are delayed until the next week. (Special meetings may be called with all team members present to resolve any interpersonal disputes.)

Text: On-line notes by the instructor.

Exam/Term Paper/Project/Grading Scheme:

The marking of the course is based on the following schedule.

Final presentation: organization, delivery, graphics	30%
Final report: quality, accuracy, completeness	30%
Company evaluation of team members	20%
Company evaluation of team performance	20%

McGill University values academic integrity. Therefore all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures. For more information see www.mcgill.ca/students/srr/honest/.

In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit in English or in French any written work that is to be graded.

Industrial Sponsorship in Undergraduate Project Courses within the Faculty of Engineering: Information for Students, Staff and Industrial Sponsors

There are a number of undergraduate courses in the Faculty of Engineering which involve projects sponsored by industry. The companies usually provide information on their products or processes that is used to formulate interesting projects for students. In turn, the students benefit from working on a project that is relevant to current engineering practice. Sometimes the students come up with innovative solutions or prototypes. This document addresses issues that may arise as a result of the industrially sponsored projects that relate to confidentiality, publication, safety, liability and the assignment of intellectual property.

Confidentiality

In some cases, a confidential document or information is provided by a company in the course of a project. In this case, the company should clearly indicate the information is confidential. This information should not be disclosed without mutual agreement with the company.

Publication

One of the functions of the university is to disseminate information and make it available for the purpose of scholarship. For undergraduate project courses, usually the only publication that results is a student report which is reviewed by the course supervisor. In the event that a further publication may result, it should be reviewed by the supervisor and company personnel.

Safety and Liability

The main purpose of industrially sponsored project courses is to teach our students how to solve the kinds of technical problems that they may encounter in the practice of engineering. The primary objective of the course is educational, rather than the delivery of a finished product suitable for commercial, industrial, or private use. As a result, the reliability and safety of any prototype that is developed during the course cannot be guaranteed.

Since students are not yet professional engineers, they generally cannot provide the professional judgement that would be expected from a member of the Order of Engineers of Quebec. Industrial sponsors wishing to use information, material or devices generated during the course of the project should first ensure that they are fit for the use considered, and have them checked for safety prior to any use.

Intellectual Property

In general, patentable intellectual property does not often arise from undergraduate project courses. Students who feel that some part of the work in a project course may be patentable are encouraged to discuss this with the Faculty course supervisor. In general, the ownership and rights to any intellectual property that directly results from a project will depend on the contribution of all parties involved, including the supervisor, students, and the industrial sponsor. The specific rules that govern intellectual property developed by McGill University academic staff and students are given in the McGill IP Policy that is available on the website of the McGill Office of Technology Transfer, www.mcgill.ca/ott/.