

Academic Org: Fac Office of Engineering – Subject: Courses offered by Fac of Eng

Course: ENGG3802 **Course ID:** 011994 **Eff Date:** 2022-07-01 **Crse Status:** Active **Apprv. Status:** Approved **【Course Rev】**
Introduction to Engineering Entrepreneurship 工程創業項目提案

The 1-unit course will introduce engineering entrepreneurship and provide the key basic concepts needed in the preparation of technical proposals and business plans. The course will introduce students to analytical process of evaluating new ideas, and metrics to compare ideas with existing approaches in the market. The course will include in class discussion of forecasts based on market size estimates, cashflow analysis and technical development plans. The course objective is to prepare students to develop and present their innovative technical ideas that have potential for practical development as a preliminary entrepreneurship project in the following semester in ENGG3803. In addition to a formal written proposal to describe their ideas, students will also be asked to present their proposal to the course instructor. Shortlisted proposals will be invited to a second presentation where a panel of experienced engineering entrepreneurs select proposals for further development.

本一學分科目介紹工程創業，並提供草擬技術方案及商業計劃所必備的基本概念。內容包括評估新理念的分析過程，以及與市場上現行方法進行指標上的比較。課堂會討論基於市場規模估計、現金流量分析、及技術發展規劃的預測。本科旨在培養學生發展及展示他們的創新技術理念，而這理念有實際發展的潛力，並可作為下學期ENGG3803當中的初步創業項目。除了正式的書面建議書，學生亦需要向課程導師作出展示。入選的提案將被邀請到經驗豐富的工程企業家前進行第二輪的展示，以作進一步的發展。

Grade Descriptor: A

EXCELLENT – exceptionally good performance far exceeding expectation in all or most of the course learning outcomes. Demonstration of superior understanding of the subject matters, ability to analyze problems and apply extensive skillful use of concepts and materials to derive proper solutions.

有關等級說明的資料，請參閱英文版本。

B

GOOD – good performance in all course learning outcomes and exceeding expectation in some of them. Demonstration of good understanding of the subject matters, ability to use proper concepts and materials to solve most of the problems encountered.

有關等級說明的資料，請參閱英文版本。

C

FAIR – adequate performance in all course learning outcomes. Demonstration of adequate understanding of the subject matters and ability to solve simple problems.

有關等級說明的資料，請參閱英文版本。

D

MARGINAL – performance barely meets the expectation in all or at least the essential course learning outcomes. Demonstration of partial understanding of the subject matters and ability to solve simple problems.

有關等級說明的資料，請參閱英文版本。

F

FAILURE – performance does not meet expectation in most of the course learning outcomes. Demonstration of serious deficiencies and retaking the course is necessary.

有關等級說明的資料，請參閱英文版本。

Equivalent Offering:

Units: 1 (Min) / 1 (Max) / 1 (Acad Progress)

Grading Basis: Graded

Repeat for Credit: N

Multiple Enroll: N

Course Attributes:

Topics:

COURSE OUTCOMES

Learning Outcomes:

- By the end of the course, students should
- understand the key concepts of engineering entrepreneurship
 - be able to write and present technical proposals and business plans
 - be able to evaluate and compare new ideas against existing approaches
 - understand the importance of market size, cash flow, and technical development

Course Syllabus:

The 1-unit course will introduce engineering entrepreneurship and provide the key basic concepts needed in the preparation of technical proposals and business plans. The course will introduce students to analytical process of evaluating new ideas, and metrics to compare ideas with existing approaches in the market. The course will include in class discussion of forecasts based on market size estimates, cashflow analysis and technical development plans. The course objective is to prepare students to develop and present their innovative technical ideas that have potential for practical development as a preliminary entrepreneurship project in the following semester in ENGG3803. In addition to a formal written proposal to describe

their ideas, students will also be asked to present their proposal to the course instructor. Shortlisted proposals will be invited to a second presentation where a panel of experienced engineering entrepreneurs select proposals for further development.

Assessment Type:
Essays : 70%
Presentation : 30%

Feedback for Evaluation:

Students are welcome to exchange ideas and provide feedback to the course instructor during their scheduled meetings. Course evaluation will also be carried out at the end of the course.

Required Readings:

NA

Recommended Readings:

Value Management: Creating Competitive Advantage , J. Jerry Kaufman (Sakura Press 2008).
Value Engineering: A Plan for Invention, Richard Park (1998).

OFFERINGS

1. ENGG3802 Acad Organization=ENO; Acad Career=UG

COMPONENTS

LEC : Size=30; Final Exam=N; Contact=1

ENROLMENT REQUIREMENTS

CAF

eLearning hrs for blended cls 0
No. of micro-modules 0
Research components (UG) 0%
University theme/ priority Innovation and Design

< E N D O F R E P O R T >