

City University of Hong Kong
Information on a Course
offered by Department of SEEM
with effect from Semester A in 2014/2015

Part I

Course Title: **Technological Innovation and Entrepreneurship**

Course Code: **SEEM6012**

Course Duration: **One Semester**

No. of Credit Units: **3**

Level: **P6**

Medium of Instruction: **English**

Prerequisites: **Nil**

Precursors: **MEEM5010 (offered until Semester A 2011/12) / SEEM5010 Engineering Management Principles and Concepts or an equivalent management course**

Equivalent Courses: **MEEM6012 Management of Technological Innovation**

Exclusive Courses: **Nil**

Note: Students may repeat a course, or an equivalent course, to improve course grade only if the previous course grade obtained is C or below.

Part II

1. Course Aims:

The aim of this course is to develop an understanding of the processes involved in developing innovative technological products, and of the skills and techniques that can be usefully employed to effectively manage development projects. At the conclusion of the course, the student is expected to:

- appreciate the nature of innovative work in order to provide a framework for understanding the skills and techniques needed to manage innovative development projects;
- understand the nature of management in innovative technological projects and the skills and techniques which can be employed in these situations;
- understand the issues and techniques valuable for managing new product design to ensure the development of high-quality, manufacturable and cost-effective products; and
- be aware of the market issues and economic aspects of technological product development projects.

2. Course Intended Learning Outcomes (CILOs)

Upon successful completion of this course, students should be able to:

No.	CILOs	Weighting* (if applicable)
1.	To identify and describe new ideas developed from group discussion and brain storming. Both technology-push and market pull will be used as sources of new ideas.	2
2.	To describe the basic process and principle of product and process innovation. To understand the different thinking pattern and work style along the process of innovation. To understand the difference between creative and critical thinking.	2
3.	To integrate managerial issues like marketing, finance and team management into new product development. To conduct an innovation project from an entrepreneurial perspective rather than an engineering perspective.	1
4.	To Identify examples and cases of innovation in daily life and work in order to be inspired by the fact that innovation is every where.	1
5.	To combine all the relevant engineering and managerial theories and methods and apply them in formulating a complete innovation and entrepreneurship project plan. The final goal is to integrate your creative ideas, physical design, patent search, marketing plan and financial plan into a complete entrepreneurial package.	3

*Weighting ranging from 1,2,3 to indicate the relative level of importance in an ascending order.

3. Teaching and Learning Activities (TLAs)

(Indicative of likely activities and tasks designed to facilitate students' achievement of the CILOs. Final details will be provided to students in their first week of attendance in this course)

Activity Type	Timetabled Activity (Hours per week)
Lecture/Tutorial/Laboratory Mix	Lecture (3);

TLA ILO	Class activities	Group project and tutorial	Total hours
CILO 1	6	3	9
CILO 2	6	3	9
CILO 3	2	2	4
CILO 4	2	2	4
CILO 5	10	3	13
Total	26	13	39

Class activities: including discussion, questioning, answering questions, participate in games and class assessments.

Group project: including idea generation, product design, market research, financial analysis and project report.

4. Assessment Tasks/Activities (ATs)

(Indicative of likely activities and tasks designed to assess how well the students achieve the CILOs. Final details will be provided to students in their first week of attendance in this course)

ILO	Class activities	Group project	Continuous tests	Weighting	Remarks
CILO 1	5	5	10	2	
CILO 2	2	5	10	2	
CILO 3	2	5	5	1	
CILO 4	3	5	5	1	
CILO 5	2	20	10	3	
Total (%)	20%	40%	40%	100%	

Class activities: Including Q&A, attendance, and class activities. A scorecard will be used to measure how active a group will be in the class. For all the questions asked in the class, a score will be given and recorded.

Continuous tests: Continuous tests will be conducted in the middle and the end of the semester.

Group project: Including a written report, the final presentation, peer assessment and a preliminary patent application form. The distribution of the scores among team members will be adjusted by peer assessment.

5. Grading of Student Achievement:

Grade Table

Letter Grade	Grade Point	Grade Definitions
A+	4.3	Excellent
A	4.0	
A-	3.7	
B+	3.3	Good
B	3.0	
B-	2.7	
C+	2.3	Adequate
C	2.0	
C-	1.7	
D	1.0	Marginal
F	0.0	Failure
P	-	Pass

Please refer to the SGS's website for details.

Part III

Keyword Syllabus:

- Creativity, innovation and entrepreneurship
- Creative thing and idea generation
- Sources of innovation
- Technology forecasting and assessment
- Innovative team
- Innovative organization
- Management fundamentals for innovation project
- Basic marketing and financial issues for innovation

Recommended Reading:

Carayannis, Elias G. 2001, *Strategic Management of Technological Learning*, USA: CRC Press.

Christiansen, James A. 2000, *Building the Innovative Organization: Management System that Encourage Innovation*, USA: St. Martin's Press, Inc.

Dorf, R. C. and Byers, T. H. (2005) *Technology Ventures: From Idea to Enterprise*, McGraw Hill, Singapore.

Drucker, Peter F. 1993, *Innovation and Entrepreneurship: Practice and Principles*, NY: Harper Business.

Hofstede, Geert H. 1997, *Cultures and Organizations: Software of the Mind*, UK: McGraw-Hill.

Jay, Ros 2000, *The Ultimate book of Business Creativity: 50 Great Thinking Tools for Transforming your Business*, UK: capstone Publishing.

Ricchiuto, J. 1997, *Collaborative Creativity: Unleashing the Power of Shared Thinking*, Akron & New York Oakhill Press.

Sherwood, Daniel 2002, *Creating an Innovative Culture*, UK: Capstone Publishing.

Smith, D (2006) *Exploring Innovation*, McGraw-Hill.

Tushman, Michael L. and Anderson, P. 1997, *Managing Strategic Innovation and Change: a Collection of Readings*, NY: Oxford University Press.

Online Resources:

Online learning material is provided via University computer network.