The Hong Kong Polytechnic University

Subject Description Form

Subject Code	CBS1A22
Subject Title	Creativity and Creative Thinking
Credit Value	3
Level	1
Pre-requisite / Co-requisite/ Exclusion	Exclusion GEC1A07 Creativity and Creative Thinking
Objectives	a. To INTRODUCE to the students the nature of creativity; b. To DEMONSTRATE to the students some useful techniques of creative thinking; c. To ALERT the students to some common obstacles to creative thinking; d. To CULTIVATE the students' ability in creative thinking through participation in experiments and problem solving, and doing exercises and projects; and e. To ENHANCE students' literacy in effective reading and writing.
Intended Learning Outcomes *(Note 1)*	Upon completion of the subject, students will be able to: a. UNDERSTAND the key concepts and theories of creativity; b. APPRECIATE the special nature of creativity; c. IDENTITY ways of overcoming obstacles to creative thinking; d. APPLY skills and techniques of creative thinking in problem solving tasks; and e. DISPLAY pro-active attitudes conducive to creative thinking. f. ENHANCE their literacy in the effective writing of a research paper (in collaboration with the ELC).
Subject Synopsis/ Indicative Syllabus *(Note 2)*	**1. The Nature of Creativity** a. Common misrepresentations b. Theories of creativity c. Measuring creativity d. Factors affecting creativity **2. The Nature of Creative Thinking** a. Creative thinking vs. critical thinking b. Lateral thinking vs. vertical thinking c. The basic question, approach, and attitude of creative thinking **3. Techniques for Lateral Thinking** **a.** Brainstorming **b.** Attributes **c.** The intermediate impossible

	d. Analogy **e.** Association **f.** Sleeping on it **4. Creativity and Problem Solving** a. Problem representation b. Techniques for problem solving c. The limitations of problem solving techniques d. Obstacles to problem solving **5. Biases and Creativity** a. Cognitive biases b. Decisional biases c. Implications for creative thinking **6. Analogy and Creative Thinking** a. Understanding analogy b. Effective and misleading uses of analogy c. Uses of analogy for creative problem solving **7. Creative ideas in the business world** a. Problems in search of solutions b. Solutions in search of problems **8. Creativity and Personality** a. Personality factors in creativity b. Theories of personality c. Attributes of a creative personality d. Personality analysis **9. Creative Thinking in Action** a. Problem definition b. The process of creative thinking c. Case study d. Analysis of past student projects **10. Concluding Remarks** a. Tradition and creativity b. Constraints and creativity **c.** Imitation and creativity **d.** A synthesis: ten ways of creative thinking
Teaching/Learning Methodology *(Note 3)*	Diversified assessment methods will be used for this subject, such that students with different thinking styles can have an opportunity to express their talents or merits. This subject is intellectual as well as practical in nature, so assessment has to be designed to strike the right balance between these two emphases of the subject.

	a. Lectures/Seminars Interactive approaches in lectures and seminars will be adopted. Q&A sessions, in-class exercises and reviews of students' video group projects will constitute a broadly effective platform for teaching and learning. **b. Case Studies** Concrete case studies of creativity from the worlds of business, arts and science will be used as stimulating illustrations, whereby students can learn not only the skills of creative thinking but also the courage and vision as manifested by the creative minds in history. **c. In-Class Experimentation of Creative Ideas** Key concepts and theories of creativity as well as skills of creative thinking will be introduced in class. Students will be given opportunities to apply the techniques by participating in short exercises in class in order to experiment and practice their creative ideas. **d. Multi-media Pedagogy** Extracts of documentaries and films, and 3-D demonstration objects will be made use of in class, whereby the diversified approaches to creativity and creative thinking are adopted. **e. Group Video Projects** Students will explore and communicate their creative ideas with their group mates by taking part in teamwork, in which they will construct their own creative ideas. They are required to videotape the whole process, expound the obstacles they have overcome and elaborate the uniqueness of their group's creative products/ideas. **f. Independent Creative Thinking** Throughout the course, students' ability for independent creative thinking will be emphasized and enhanced. The problem-based quizzes and the term paper will be adopted as the effective channels for the students to define, develop and defend their attempts at a creative solution to problem-sets as assigned by the lecturer. **g. Enhancement of Literacy in Collaboration with ELC** To enhance students' literacy in effective writing so as to fulfill their EW requirement, the ELC will play an active role in offering lectures and tutorials specifically designed for the EW requirement of this course. Before the beginning of the course, arrangement with the ELC will be implemented. To enhance students' literacy in reading so as to fulfill their ER requirement, the ELC will offer help and relevant packages aiming at enhancing the students' ability in comprehension and in effective reading. Before the beginning of the course, arrangement with the ELC will be implemented.

Assessment Methods in Alignment with Intended Learning Outcomes

(Note 4)

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					
		a	b	c	d	e	
Individual Term Paper (1,500 – 2,500 words) (EW)(ER)	50%	✓	✓	✓	✓	✓	
Group Video Project	30%	✓	✓	✓	✓	✓	
In-class Exercises	20%	✓	✓	✓	✓	✓	
Total	100%						

Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:

a. <u>In-class Exercises</u>

The in-class exercises aim at the direct experimentation by the students of the specific skills and techniques of creative thinking taught in the lectures. Students will be assessed on the basis of the originality of their conceptualization and construction of small-scale creative products, ideas or service in the light of particular creative methods.

b. <u>Group Video Project</u>

This is a dynamic opportunity for the students to communicate, collaborate and even challenge the creative ideas among their group mates. Students are assessed in terms of their creative solutions offered after the spelling out the various types of obstacles they have in collaboration identified and overcome. The assessment here considers the students' identification of problems as equally important as their construction of solutions.

On this score, the group video project provides a broader scope of the assessment than the quizzes and the in-class exercises, and students are given more room to manifest their creativity. More importantly, samples of students' projects will be reviewed by the lecturer in class with the students, which will not only deepen their understanding of the possible contribution made by their fellow students but also consolidate their proactive attitudes, determination and confidence in seeking superb creative ideas, the possibility of which is vividly demonstrated and evidenced by the exemplars displayed by their fellow students.

c. <u>Term Paper and the EW & ER Requirement</u>

The final assessment of this course is done through an individual term paper. The students reaching this stage will have mastered the effective conceptual tools (concepts, theories and techniques of creativity), cultivated valuable creative experience through the previous assessment components as well as knowledge, acquired in class, requisite for the success of creative thinking. This assessment is based on a 1,500 – 2,500 words term paper. This is also to serve as the fulfillment of the English Writing (EW) Requirement. In order to pass this subject, students must pass the writing component, i.e., attaining a minimum grade "D" in the writing component.

In addition, the term paper requires students to respond to a question on the designated reading to demonstrate their knowledge of the reading in their term paper.

Student Study Effort Expected	Class contact:	
	▪ Lectures	26 Hrs.
	▪ Tutorials/Seminars	13 Hrs.
	Other student study effort:	
	▪ Self-study	25 Hrs.
	▪ Group Video Project	25 Hrs.
	▪ Research and Term Paper Writing (EW)	30 Hrs.
	Total student study effort	119 Hrs.

Reading List and References

Essential Reading (for ER)

1. Sternberg, Robert J (2007). *Wisdom, Intelligence, and Creativity Synthesized*. Cambridge University Press.

Reference List

1. Adair, John Eric (2009). *The Art of Creative Thinking: How to Be Innovative and Develop Great Ideas*. London & Philadelphia : Kogan Page.
2. Amabile, Teresa M. (1996). *Creativity in Context*. Boulder, Colorado: Westview Press.
3. De Bono, Edward (1977). *Lateral Thinking*. Harmondsworth: Penguin Books.
4. De Bono, Edward (1992). *Serious Creativity*, HarperCollinsBusiness.
5. Foster, Jack. (1996). *How to Get Ideas*. San Francisco: Berrett- Koehler Publishers.
6. Greene, Leonard M. (2001). *Inventorship: The Art of Innovation*. New York: John Wiley & Sons.
7. Hurson, Tim (2007). *Think Better: An Innovator's Guide to Productive Thinking*. New York, N. Y.: McGraw-Hill.
8. Koester, Arthur (1964). *The Act of Creation*, ARKANA: Penguin Groups, 1964.
9. Matlin, Margaret W. (1994). *Cognition* (Third Edition). Fort Worth: Harcourt Brace Publishers.
10. Michalko, Michael (2006). *Thinkertoys: A Handbook of Creative-Thinking Techniques*. 2nd edition. Berkeley: Ten Speed Press.
11. Moscovich, Ivan (2001). *1000 Play Thinks*, New York, Workman Publishing Company.
12. Moser-Wellman, Annette (2001). *The Five Faces of Genius: Creative Thinking Styles to Succeed at Work*, Penguin Books.
13. Nalebuff, Barry and Ayres, Ian (2003). *Why Not?: How to Use Everyday Ingenuity to Solve Problems Big and Small*. Boston: Harvard Business School Press.
14. Ng, Aik Kwang (2001). *Why Asians are Less Creative than Westerners*.

	Singapore: Prentice-Hall, 2001. 15. Perkins, David (2000). *The Eureka Effect: The Art and Logic of Breakthrough Thinking*. New York: W. W. Norton & Company. 16. Root-Bernstein, Robert and Michele (1999). *Sparks of Genius: the 13 Thinking Tools of the World's Most Creative People*. Boston: Houghton Mifflin Company. 17. Simonton, Dean Keith (1999). *Origins of Genius*: *Darwinian Perspectives on Creativity*, New York and Oxford: OUP. 18. Sternberg, Robert J. (ed.), (1990). *Handbook of Creativity*. Cambridge: Cambridge University Press. 19. Sternberg, Robert J. and Lubart, Todd I. (1999). *Defying the Crowd: Cultivating Creativity in a Culture of Conformity*. New York: The Free Press.

Note 1: Intended Learning Outcomes
Intended learning outcomes should state what students should be able to do or attain upon completion of the subject. Subject outcomes are expected to contribute to the attainment of the overall programme outcomes.

Note 2: Subject Synopsis/ Indicative Syllabus
The syllabus should adequately address the intended learning outcomes. At the same time over-crowding of the syllabus should be avoided.

Note 3: Teaching/Learning Methodology
This section should include a brief description of the teaching and learning methods to be employed to facilitate learning, and a justification of how the methods are aligned with the intended learning outcomes of the subject.

Note 4: Assessment Method
This section should include the assessment method(s) to be used and its relative weighting, and indicate which of the subject intended learning outcomes that each method purports to assess. It should also provide a brief explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes.

Subject Offering Department	CBS
Cluster Area	Please check the box(es) below to indicate the cluster area(s) the subject contributes in a major way: ☒ Human Nature, Relations and Development [CAR(A)] ☐ Science, Technology and Environment [CAR(D)] ☐ Chinese History and Culture [CAR(M)] ☐ Cultures, Organisations, Societies and Globalisation [CAR(N)]
Medium of Instruction	English
Requirements intended to fulfil	☐ China-Study Requirement (CSR) ☒ English Reading (ER) and English Writing (EW) ☐ Chinese Reading (CR) and Chinese Writing (CW)