Subject Description Form

Subject Code	ITC1001D/ ITC1A01
Subject Title	Introduction to Thinking Styles
Credit Value	3 credits
Level	1
Pre-requisite/ <Co-requisite> / (Exclusion	Nil
Objectives	This course helps students to understand, study, integrate and apply various thinking styles to solve problem effectively and creatively. This is a foundation-training course which widens students' ways of thinking as well as decision making towards professional practices. The course aims to develop students' integrated thinking skills in solving ill-defined problems for their future development in the areas of technology, business and design.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: (a) acquire a holistic view of the principles and functions of various thinking styles; (b) develop an integrative and strategic thinking style for problem solving; (c) enhance the ability in innovative problem solving and decision making; and (d) apply the various thinking styles to solve problem effectively and creatively. The (a) is developing student's literacy through the study of a holistic view of various thinking styles. The (b) and (c) are developing student's higher order thinking through enhancing student's integrative and strategic thinking styles as well as their ability in problem solving and decision making. The (d) is developing student's skills for life-long learning through applying the thinking styles he/she has learnt to solve real-world's problems.
Subject Synopsis/ Indicative Syllabus	**(1) Introduction to the principles of thinking styles** • Understanding thinking styles • Human intelligence and ways of thinking • The pattern making and self-maximizing systems • Forms of thinking styles **(2) Function of thinking styles** • The art of thinking • Working with thinking styles • Transforming culture by thinking styles • Society and creativity **(3) Integrating creative and logical thinking** • Creativity and intelligence • Motivation and personal properties • The principle of logic • The language of logic for argument • Blending creative and logical thinking

	(4) <u>Applying thinking styles to problem solving</u>
	• Problem identification • Managing thinking styles • Integrative thinking for problem solving Strategic thinking and decision making
Teaching/Learning Methodology	The subject comprises of lectures and tutorials. Tutorials will be conducted in small groups. Assignment(s) will largely be problem based where students will be asked to critically study and analyze examples of diverse strategies and designs in practical situations in order to help students to integrate various thinking styles for generating strategic solutions.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)			
		a	**b**	**c**	**d**
Group Presentation	30%	✓			✓
1 individual project with 1 report	20%+50%	✓	✓	✓	✓
Total	**100%**				

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

The group presentation of design thinking exercise help students to adopt several design thinking methods to condense their ideas. Also, this activity would encourage students to gain more interactions with peers from different backgrounds to foster cross-disciplinary collaborations in the future.

The individual project and report which contains intensive individual tutorials with the subject lecturer to help students to build their projects with the knowledge from the course. The hands-on process gives them empirical experience of adopting various thinking styles and design thinking.

The assessment method of the assignment is divided into four categories in order to help students to achieve the intended learning outcomes, they are:
1. Understanding Thinking (25%) – assessing students' ability to apply various thinking styles to tackle real world problems;
2. Problem Solving Skills (25%) – assessing students' ability to solve problems by using research and analysis;
3. Independent Learning (25%) – assessing students' ability to self-motivation in furthering knowledge, skills and interests; and
4. Critical Reflection (25%) – assessing students' ability to evaluate own process of learning to make improvements. An Assessment Rubric is designed to assess students' coursework and assignment.

Student Study Effort Expected	Class contact:	
	• Lecture	26 Hrs.
	• Tutorial/ Studio	12 Hrs.
	Other student study effort:	
	• Assignments	18 Hrs.
	• Research/ Experiment	52 Hrs.
	Total student study effort	108 Hrs.
Reading List and References	**Books**	

Books

Brunas-Wagstaff, J. (1998). *Personality: a cognitive approach*. London: Routledge.

Fogler, H.S., LeBlanc, S.E. & Rizzo, B. (2014). *Strategic for Creative Problem Solving*, Pearson, USA.

Hendry, J., Johnson, G., & Newton, J. (1993). *Strategic thinking: leadership, and the management of change*. Chichester; New York: J. Wiley.

Herrmann, N. (1996). *The whole brain business book*. New York: McGraw- Hill.

Hicks, M. J. (2004). *Problem solving and decision making: hard, soft and creative approaches* (2nd ed.). London: Thomson.

Kawakami, K., (1997). *99 More Unuseless Japanese Inventions: The Art of Chindogu*. London: W.W. Norton &Co.

Kawakami, K., Fearnley-Whittingstall, H., (2004). *Bumper Book of Unuseless Japanese Inventions: The Art of Chindogu*. London: Harper Collins Entertainment.

Kawakami, K., Papia, D., & Fearnley-Whittingstall, H., (2005). *The Big Bento Box of Unuseless Japanese Inventions: The Art of Chindogu*. New York: W.W. Norton.

KEA European Affairs (2009). *The impact of culture on creativity.*

Martinez, M. E. (2013). *Future bright: a transforming vision of human intelligence*, New York: Oxford University Press.

Richards, R. (2007), *Everyday creativity and new views of human nature*. Washington, D. C.: American Psychological Association.

Runco, M., Pritzker, S. (2011). *Encyclopedia of creativity 2nd Edition*, London: Academic Press.

Sternberg, R. J. (1996). *Successful intelligence: how practical and creative intelligence determine success in life*. New York: Simon & Schuster.

Sternberg, R. J. (1997). *Thinking styles*. Cambridge; New York: Cambridge University Press.

Sternberg, R. J., & Wagner, R. K. (1994). *Mind in context: interactionist perspectives on human intelligence*. Cambridge; New York, N.Y Cambridge University Press.

Watanabe, K. (2009). *Problem solving 101: a simple book for smart*

	people. New York: Portfolio.
	Journals
	Fan, J.Q., & Zhang, L.F., (2014). 'The role of perceived parenting styles in thinking styles', Learning and Individual Differences, 32, 204-211.
	Hofstede, G. (2011). 'Dimensionalizing Cultures: The Hofstede Model in Context' Psychology and Culture, Vol.2(1).
	Zhang, L.F. (2002). 'Thinking styles and cognitive development', The Journal of Genetic Psychology, 163(2), 179-195.
	Zhang, L.F., & Sternberg, R.J. (2005). 'A threefold model of intellectual styles', Educational Psychology Review, 17(1).
	Zhang, L.F., (2006). 'Thinking styles and the big five personality traits revisited', Personality and Individual Differences, 40, 1177-1187.