The Hong Kong Polytechnic University

Subject Description Form

Please read the notes at the end of the table carefully before completing the form.

Subject Code	SFT4217X
Subject Title	Integrated Capstone Project
Credit Value	6
Level	4
Pre-requisite/ Co-requisite/ Exclusion	**Exclusion**: ITC4056T Final Year Project by Thesis, ITC4215D Final Year Project by Collection, SFT415CP Capstone Project by Thesis, SFT416CP Capstone Project by Collection, SFT417CP Capstone Group Project by Thesis and any other equivalent capstone project
Objectives	The objectives of this subject are to: • provide a student with the opportunity to apply and integrate the knowledge of artificial intelligence and data analytics (AIDA) to his/her discipline. • develop the capabilities of a student in analyzing and solving complex and possibly real-life problems using AIDA. • Train students with skills on systematic development and documentation of a significant piece of work.

Intended Learning Outcomes *(Note 1)*	Upon completion of the subject, students will be able to: Professional/academic knowledge and skills (a) conduct literature surveys to locate materials and sources relevant to the selected problem area in a specific discipline; (b) understand the materials obtained and connect the materials with the problem to be solved using AIDA knowledge and skills; (c) define and specify the problem precisely; (d) assimilate and apply the learnt knowledge to generate good solutions to the problem; (e) think critically the formulation of alternative models and solutions to the problem, in the analysis of approaches to the solution and their implementation; and (f) evaluate the final outcome in an objective manner; Attributes for all-roundedness (g) improve presentation and communication skills via oral presentation; (h) enhance technical report writing skills with proper organization of materials; (i) develop the ability to learn independently and to find/integrate information from different sources required in solving real-life problems; (j) manage the project efficiently and effectively through the supervision of supervisor(s); and

	(k) work collaboratively with related parties (e.g. vendors, sponsor company, technical support staff, team-partners, research students, etc.).
Subject Synopsis/ Indicative Syllabus *(Note 2)*	1. **In-depth Study of a Topic Typically Proposed by theSupervisor** 2. **Project Meeting and Planning** 3. **Proposal Writing** 4. **Regular Progress Checking and Reporting** 5. **Project Documentation** 6. **Presentation and Demonstration** Students are expected to identify a project topic with a supervisor inFashion and Textiles, and a co-supervisor with artificial intelligence and data analytics expertise. Students need to demonstrate their knowledge in both the fashion and textile discipline and AIDA in the project, receiving advice from both supervisors. The project should represent requisite effort in analysing and interpreting the data/information obtained, using the principles and techniques learnt from various related subjects. Students are also expected to demonstrate significant analytical and, preferably, research ability in the chosen application domain.
Teaching/Learning Methodology *(Note 3)*	The Integrated Capstone Project spans across the academic year for two consecutive semesters. The teaching/learning activities include regular project meetings with the supervisor and the co-supervisor, guided study of project materials, independent project development work and other project management tasks.
Assessment Methods in Alignment with Intended Learning Outcomes *(Note 4)*	(see table below)

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)										
		a	b	c	d	e	f	g	h	i	j	k
1. Continuous Assessment	100%	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Total	100%											

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

The Integrated Capstone Project will be accessed by the supervisor/co-supervisor and other assessors. Attributes to be assessed include, but not limited to, Problem Identification, Problem Solving, Communication and Presentation, Project Management, and Self-Discipline.

Integrated Capstone Projects should be problem-oriented and there are no restrictions on the nature of the problem except that it should be relevant to fashion and textiles discipline and AIDA. The project could be practical, academic or a hybrid in which the student is encouraged but not constrained to have some original contributions. Each student has to submit a proposal, a mid-term checkpoint progress report and a final report.

	The proposal must be approved by the supervisor/co-supervisor before the student can proceed with the Integrated Capstone Project. An oral presentation and demonstration is essential at the end of the project. A mid-term presentation and demonstration may also be required for proper continuous assessment.	
Student Study Effort Expected	Class contact:	
	▪ Lecture	0 Hrs.
	Other student study effort:	
	▪ Searching and reading materials, meeting with supervisor/co-supervisor/others, design and system development, testing, documentation, presentation, etc	210 Hrs.
	Total student study effort	210 Hrs.
Reading List and References	**Reference Books:** Kumar, Ranjit, *Research Methodology: A Step-by-step Guide for Beginners*, 3rd Edition, SAGE Publications, 2011. Burns, Robert B., *Introduction to Research Methods*, 4th Edition, SAGE Publications, 2000. Roberts, Carol M., *The Dissertation Journey: A Practical and Comprehensive Guide to Planning, Writing, and Defending Your Dissertation*, 3rd Edition, Corwin Press, 2007. Mauch, James E. and Park, Namgi, *Guide to the Successful Thesis and Dissertation: A Handbook for Students and Faculty*, 5th Edition, Marcel Dekker, 2003. Rudestam, Kjell Erik and Newton, Rae R., *Surviving Your Dissertation: A Comprehensive Guide to Content and Process*, 2nd Edition, Sage Publications, 2001. Garson, G. David, *Guide to Writing Empirical Papers, Theses and Dissertations*, Marcel Dekker, 2002. Reinhart, Susan M., *Giving Academic Presentations*, 2nd Edition, University of Michigan Press, 2013. Oshima, Alice and Hogue, Ann, *Writing Academic English*, 4th Edition, Pearson Longman, 2006. American Psychological Association. *Publication Manual of the American Psychological Association*, 6th Edition, American Psychological Association, 2010.	

	Szuchman, Lenore T., *Writing with Style: APA Style Made Easy*, 5th Edition, Wadsworth/Cengage Learning, 2011. Statistics, simulation, programming, and relevant books. ACM and IEEE magazines, Transactions and Journals. Other International Journals. Relevant conference proceedings and magazines (including ACM and IEEE conferences). Technical reports from universities and major companies.

Note 1: Intended Learning Outcomes
Intended learning outcomes should state what students should be able to do or attain upon subject completion. 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, overcrowding 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 is intended to assess. It should also provide a brief explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes.

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