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	COMP1003
Subject Title	Statistical Tools and Applications
Credit Value	1
Level	1
Pre-requisite / Co-requisite/ Exclusion	Nil
Objectives	
Intended Learning Outcomes *(Note 1)*	Upon completion of the subject, students will be able to: a. develop and extrapolate statistical concepts in data analysis and problem solving; b. use software tools and statistical packages in solving statistical applications; c. undertake the formulation of statistical problems through continuous self-learning; d. demonstrate the abilities of logical and analytical thinking.
Subject Synopsis/ Indicative Syllabus *(Note 2)*	1. Problem and Application Formulation Analysis of problems; formulation of solution; use of tools (e.g. Excel) to generate fast solutions (e.g. finding the standard deviation of a data set); handling large data sets. 2. Graphing Excel: use of formulae; statistical functions; graph plotting; application of graph plotting, e.g. scattered plot. 3. Random variables Excel: generation of random variables in various distributions; modeling using random variables; Monte Carlos simulation techniques and applications. 4. Regression Excel: regression functions; regression analysis; SPSS: data definition; regression analysis.
Teaching/Learning Methodology *(Note 3)*	Practical problem solving and case study will be supported via hands-on experience in laboratories.

Assessment Methods in Alignment with Intended Learning Outcomes	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					
(Note 4)			a	b	c	d	e	
	1.Lab work, home-work, quizzes and mid-term test	100%	X	X	X	X		
	Total	100 %						

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

Student Study Effort Expected	Class contact:	
	▪ Laboratory	21 Hrs.
	Other student study effort:	
	▪ Self studying	14 Hrs.
	Total student study effort	35 Hrs.

Reading List and References	[1] M.R. Middleton. *Data analysis using Microsoft Excel: updated for Office XP*, 3rd edition, Brooks/Cole/Thomson Learning, 2004.
	[2] D.M. Levine. *Statistics for managers using Microsoft Excel*, 5th edition, Pearson/Prentice Hall, 2008.
	[3] S.L. Weinberg and S.K. Abramowitz. *Statistics using SPSS: an integrative approach*, 2nd edition, Cambridge University Press, 2008.

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.