Subject Description 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	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; and (d) demonstrate the abilities of logical and analytical thinking.
Subject Synopsis/ Indicative Syllabus	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; modelling using random variables; Monte Carlos simulation techniques and applications. 4. **Regression** Excel: regression functions; regression analysis; SPSS: data definition; regression analysis.
Teaching/Learning Methodology	Practical problem solving and case study will be supported via hands-on experience in laboratories.

<table>
<tr><td>Assessment Methods in Alignment with Intended Learning Outcomes</td><td>
<table>
<tr><td rowspan="2">Specific assessment methods/tasks</td><td rowspan="2">% weighting</td><td colspan="4">Intended subject learning outcomes to be assessed</td></tr>
<tr><td>a</td><td>b</td><td>c</td><td>d</td></tr>
<tr><td>1.Lab work, home-work, quizzes and mid-term test</td><td>100%</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td></tr>
<tr><td>Total</td><td>100%</td><td colspan="4"></td></tr>
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<tr><td rowspan="5">Student Study Effort Expected</td><td>Class contact:</td><td></td></tr>
<tr><td>▪ Laboratory</td><td>21 Hrs.</td></tr>
<tr><td>Other student study effort:</td><td></td></tr>
<tr><td>▪ Self studying</td><td>14 Hrs.</td></tr>
<tr><td>Total student study effort</td><td>35 Hrs.</td></tr>
<tr><td>Reading List and References</td><td colspan="2">

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

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