Subject Description Form

<table>
<tr><td>Subject Code</td><td>APSS3224</td></tr>
<tr><td>Subject Title</td><td>Social Data Analytics</td></tr>
<tr><td>Credit Value</td><td>3</td></tr>
<tr><td>Level</td><td>3</td></tr>
<tr><td>Pre-requisite/
Co-requisite/
Exclusion</td><td>NIL</td></tr>
<tr><td>Assessment Methods</td><td>
<table>
<tr><th>100% Continuous Assessment</th><th>Individual Assessment</th><th>Group Assessment</th></tr>
<tr><td>1. Written assignment</td><td>--</td><td>40%</td></tr>
<tr><td>2. Presentation & participation</td><td>30%</td><td>--</td></tr>
<tr><td>3. Quiz</td><td>30%</td><td>--</td></tr>
</table>

The grade is calculated according to the percentage assigned;
The completion and submission of all component assignments are required for passing the subject; and
Student must pass all component(s) (standard of passing) if he/she is to pass the subject.

</td></tr>
<tr><td>Objectives</td><td>This subject aims to enable students to :
1. acquire an understanding of basic data science applications in social research;
2. design social research that emphasizes causal inference;
3. acquire skills in using various data analytical tools.</td></tr>
<tr><td>Intended Learning Outcomes</td><td>Upon completion of the subject, students are able to:
a. display competencies in informational literacy that include the ability to find, acquire, evaluate, manage and use information in a range of media; or acquire, organize and present information through technology-based activity;
b. apply problem-solving skills, including using logical, critical and innovative thinking to identify critical issues, conceptualize problem and formulate solutions, collect, collate and analyze relevant information for social change and community improvement;
c. communicate effectively in oral, written, numerical and graphic forms to present well-reasoned argument.</td></tr>
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<table>
<tr><td>Subject Synopsis/ Indicative Syllabus</td><td>1. Introduction
2. Data visualization
3. Designing social research
4. Collecting social data online
5. Causal effects
6. Causal mediation
7. Text analysis
8. Spatial analysis
9. Machine learning</td></tr>
<tr><td>Teaching/Learning Methodology</td><td>Lectures are employed to facilitate students' learning of the subject. The lectures introduce students to the major concepts and theories. The instructors also demonstrate the applications of various data analysis tools. Students are encouraged to discuss and analyze various social issues with reference to those concepts and skills they have acquired.</td></tr>
<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="3">Intended subject learning outcomes to be assessed (Please tick as appropriate)</td></tr>
<tr><td>a</td><td>b</td><td>c</td></tr>
<tr><td>1. Written assignment</td><td>40%</td><td>✓</td><td>✓</td><td>✓</td></tr>
<tr><td>2. Presentation & participation</td><td>30%</td><td>✓</td><td>✓</td><td>✓</td></tr>
<tr><td>3. Quiz</td><td>30%</td><td>✓</td><td>✓</td><td>✓</td></tr>
<tr><td>Total</td><td>100%</td><td colspan="3"></td></tr>
</table>

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

<u>Written assignment</u>:

Students are required to submit a group written assignment after their project presentation. In writing the paper, students are expected to draw upon relevant concepts and theories in analyzing the selected topic.

<u>Quiz</u>:

A quiz will be conducted in class. Students are required to demonstrate the knowledge and skills they have learnt in the subject. The quiz is an effective method to assess how much the students have learnt.

<u>Project presentation and participation</u>:

Students have to team up to work on a project and to deliver a verbal presentation in class, so as to convey their findings in a coherent manner and be able to respond satisfactorily to questions and critiques of their presentation.</td></tr>
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Student Study Effort Required	Class contact:	
	▪ Lecture and project presentation	39 Hrs.
	Other student study effort:	
	▪ Self-studies (including preparation for seminars, writing term paper, revision and preparation for the quiz)	65 Hrs.
	Total student study effort	104 Hrs.
Reading List and References	**Essential** Gelman, A., & Hill, J. (2006). *Data analysis using regression and multilevel/hierarchical models*. Cambridge; New York: Cambridge university press. James, G., Witten, D., Hastie, T., & Tibshirani, R. (2013). *An introduction to statistical learning* (Vol. 112). New York: Springer. Wickham, H. (2016). *ggplot2: elegant graphics for data analysis (2nd ed.)*. Cham, Switzerland: Springer. **Supplementary** Angrist, J. D. and Pischke, J. S. (2008). *Mostly harmless econometrics: An empiricist's companion*. Princeton: Princeton university press. Silge, J. and Robinson, D. (2017). *Text mining with R: A tidy approach*. CA: O'Reilly Media. Salganik, M. J. (2018). *Bit by Bit: Social Research in the Digital Age*. Princeton, New Jersey: Princeton University Press. Morgan, S. L., & Winship, C. (2014). *Counterfactuals and causal inference: Methods and principles in social research*. NY: Cambridge University Press. VanderWeele, T. (2015). *Explanation in causal inference: methods for mediation and interaction*. NY: Oxford University Press.	